'Benjamin Worsley (1618-1677):

Commerce, Colonisation, and the Fate of Universal Reform'

Volume 2

Thomas Leng

Thesis submitted for Degree of Doctor of Philosophy

Department of History, University of Sheffield

February 2004

<u>Part 3.</u>

<u>1660-77.</u>

7. 'The Interest of all Persons Universally'.

The Commercial Restoration, 1660-1673.

In 1660 Benjamin Worsley was roughly 43 years old. He had spent most of his adult life in revolutionary England, so adapting to the return of the monarchy would surely have been difficult, especially given the fate of some his former patrons. Sir Henry Vane was executed on 14 June 1662, whilst Sir Hierome Sankey was excluded from the act of indemnity. Worsley was not so prominent as to be in danger of suffering the former's fate, but he might have lost his lands and been barred from public employment. Fortunately, Worsley had not burned his bridges with the Boyle family, despite essentially ending up in opposition to Lord Broghill, who became Earl of Orrery as a reward for transferring his allegiance from Henry Cromwell to the monarchy in 1660. Worsley apparently used this influential contact to ensure that his Irish estates were not confiscated, selling them 'at a high price' to Captain Robert Fitzgerald, Orrery's nephew, before Orrery supported Worsley and Fitzgerald's petition to confirm the title, probably in December 1660.¹ Worsley's immediate financial future was therefore secured.

The attitude of the returning King gave some grounds for optimism, too. At Breda Charles had voiced his willingness to grant some liberty of conscience, and Worsley hoped that he might find room 'to walke in the Kings broad high way'.² If not, his intention was to 'step into the next meadow, where I may be perhaps a lesse offence

¹ CSPI, 1663-1665, p. 472. Fitzgerald's claims to preferential treatment were strengthened due to his having been responsible for capturing the parliamentary commissioners, and sometime employers of Worsley, Miles Corbett and John Jones during the capture of Dublin castle in December 1659. Clarke, *Prelude to Restoration in Ireland*, p. 110.

² Letter, [Worsley] to [Beale], c. May-June 1660. BL Add. MS 78685, fol. 103r.

to others, & meete with lesse opposition to my selfe'. At some point in 1660, Worsley retreated to his wife's home town of Dartmouth, and from that safe distance he corresponded with Hartlib and John Beale about the religious settlement that was currently being fashioned. Debates centred on the form of the restored national church, with Robert Boyle being one prominent advocate of admitting Presbyterians and moderate Independents. Worsley's own distaste for strict religious discipline was shown when he declared himself to be 'almost of that Doctors minde that told those people that would have a May pole they should and those that would not should have none'.³ Such an attitude was hardly Puritan, but Worsley was no conformist either, and he scorned those 'who thinke lyturgy *the* best service they can performe to God', without 'any other fervour & zeale of spirit in their addresses vnto God'. Worsley's loyalties lay with another sort of worship:

Those on *the* other hand who thinke that Lyturgy a little too pædagogicall for them. A forme into which they can no way cast the freedome Liberty fire and fervour of their owne spirits; They who desire and thinke it but reasonable to offer that service to God that is most sutable to him, according to *the* measure of that knowledge and discovery they have had of him./ If they shall for these reasons desire also to be freed and delivered from those weak (not to call them beggarly) Rudiments I know but little ground for any sober Christians to Censure them.

Beale had already written to Worsley with his own hopes 'that the Porch or outward Courte of *the* Temple should be arched or enlarged wide enough to receive all Nations'.⁴ The liturgical task, therefore, was to discover the most 'universall summons', and for this Beale turned to the apostolic, pre-Nicene church- 'Is the new addition better than the old unquestionable simplicity? Is the language of these men better than the Inspiration of God?'.⁵ Worsley was similarly dismissive of that 'vaine flatt insipid and

³ Letter, Worsley to Hartlib, 10 September 1660. HP 33/2/15A.

⁴ Letter, Beale to Worsley, 29 August 1660. Royal Society, Boyle Letters, Volume 1, fol. 51r.

⁵ Ibid., fol. 51v.

prolixe Tautology & Repetition as hath beene *the* too much Custome of this Age'.⁶ But he avoided publicly becoming 'an Interested Party on eyther side', a stance which soon proved sensible.

Charles II may have been willing to offer toleration to loyal subjects, but the parliament elected in May 1661 was set on revenge. This assembly met on a wave of reaction against dissent, which had been growing since November 1660 when the previous parliament had rejected the compromise of 'mixed episcopacy'.⁷ This was exacerbated by Thomas Venner's Fifth Monarchist rebellion in January 1661, which was followed by mass arrests of Ouakers and Baptists.⁸ Affiliation with the Boyles did not protect Worsley this time, and William Petty (by now knighted) reported to his brother that Worsley was 'in prison upon suspition of the late Insurrection which was Reall & terrible'.⁹ This third spell in confinement apparently did not last long, but England under Charles II was becoming increasingly inhospitable to dissenters and former republicans. Fortunately for Worsley certain members of the new regime recognised that they might salvage some of the policies and rhetoric of the Commonwealth, including its approach to governing trade- something which few were better informed of than the former secretary of the Council of Trade.

As had been the case previously, the return of parliament in 1659 attracted numerous commercial proposals, with one tract calling for the erection of a committee

⁶ Letter, Worsley to Hartlib, 10 September 1660. HP 33/2/15A-B.

⁷ Spurr, English Puritanism, pp. 129-130; J. Coffey, Persecution and Toleration in Protestant England, 1558-1689 (London: Longman, 2000) p. 167.

⁸ R.L. Greaves, Deliver us from Evil. The Radical Underground in Britain, 1660-1663 (New York &

Oxford: Oxford U.P., 1986) pp. 49-57; Coffey, From Persecution to Toleration, pp. 167-8. ⁹ Letter, William Petty to John Petty, 9 January 1661. BL Add. MS 72850, fol. 21r.

for 'the advance of trade ... it being of so much concernment, towards the prosperity of these Nations'.¹⁰ This was no vain hope, given that the return of the Rump delivered power back to members of the first Council of Trade, including its president Vane (not to mention its secretary). Indeed, the association between republicanism and commerce had long been noted in the Italian city-states and the United Provinces, and now England could be added to this list; as the author of The Grand Concernments of England Ensured put it, 'Trade is the very life and spirits of a Common-wealth'.¹¹ In contrast to monarchies, whose 'maxime' is to 'keep the unruly Plebeants from being over pursey, least their wits should increase with their wealth, and they should begin to contend for their Priveledges', republics needed to actively maintain their popularity, through promoting prosperity.¹² However, to the delight of royalist propagandists, the economic depression of 1659 seemed to disprove the argument that trade flourished in the absence of monarchy, and this author was aware that support for a restoration of the Stuarts was growing, on the grounds of 'a mistaken belief, that Trade would thereby lift up its head^{7,13} To refute this, he asked rhetorically 'What have the best of all their Majesties that ever Reigned in England done for the encouragement of Trade? If they had done any thing Material, England had been more bound to thank them then it is, but Trade in general hath been little befriended'. However, many of those calling for a restoration also argued that 'Advance of Trade is the common interest of the Nation', and sought to demonstrate that commerce could flourish under a monarchy.¹⁴

¹⁰ Long-Parliament-Work (London, June 9 1659) p. 16.

¹¹ The Grand Concernments of England Ensured (London, October 25 1659) p. 32.

¹² Ibid., p. 17.

¹³ Ibid., p. 15. For royalist propaganda, T & C, pp. 66-8.

¹⁴ The Grand Concernments of England Ensured, p. 15.

Commercial pamphleteers willingly responded to this call, as did Tobias Gentleman (an old collaborator of John Keymer), who called on his 'Countrimen' to 'Rouse up your selves, and be industrious, seeing his Majesty is so graciously pleased as to give all his Subjects that encouragement to Trade and Commerce, that never any King of England ever did'.¹⁵ The crown's awareness of the need to live up to these expectations was shown symbolically by the motifs glorifying commerce of Charles' royal entry of 1661.¹⁶ More palpably, the monarchy was willing to adopt some of the measures of the usurper regimes, allowing such vigorous commercial patriots as Sir George Downing to transfer their allegiance to the monarchy with relative ease.¹⁷ Having already established a Privy Council committee for trade and plantations, in August 1660 the regime addressed a letter to London's Aldermen, notifying them of His Majesty's 'princely consideration how necessary it is for the good of the kingdom, that Trade and Commerce with foreign parts, be with all due care, incouraged and maintayned'.¹⁸ Unsurprisingly they courted the opinions of the chartered companies, who might be expected to rally around a return to the pre-Civil War commercial order, but equally this letter addressed 'the unincorporated Traders, for Spain, France, Portugal, Italy, and the West India Plantations', and thus the Council of Trade formed on 7 November included prominent colonial merchants amongst its 62 members.¹⁹ Most notable were Cromwell's advisors, Thomas Povey and Martin Noell, whose enthusiastic lobbying on behalf of West Indian trade encouraged the crown to found a similarly large

¹⁵ T. Gentleman, The Best Way to make England the Richest and Wealthiest Kingdome in Europe, by Advancing the Fishing-Trade (London, 1660) sig. B2v.

¹⁶ B. Hoxby, "The Government of Trade: Commerce, Politics, and the Courtly Art of the Restoration", *English Literary History*, Vol. 66, No. 3 (1999) pp. 591-627.

¹⁷ Ibid., p. 593; J. Scott, "Good Night Amsterdam'. Sir George Downing and Anglo-Dutch Statebuilding", *English Historical Review*, cxviii, 476 (April 2003) pp. 351-2.

¹⁸ Andrews, "British Committees", pp. 62-6 (quote on p. 65).

¹⁹ Ibid., pp. 65-8 (quote on p. 65).

Council of Plantations based on instructions drafted by Povey.²⁰ The increasing importance attached to colonial trade for national prosperity was reflected when parliament passed the first of several Navigation laws in September 1660, which paid greater attention to enclosing colonial trade to England than the Rump's Act, notably by ensuring that the most important, 'enumerated' commodities, were taken to England before being re-exported.²¹ Thus, although old cavaliers like Sir William Berkeley in Virginia were restored to power, they found themselves subjected to a more restrictive commercial regime than that erected in 1651, ensuring that colonial trade would not drift back into the hands of the Dutch, or away from English custom farmers.²²

Worsley has occasionally been included alongside Povey and Downing as one of the key thinkers behind these developments, based on a draft of the instructions of the Council of Trade being wrongly identified as written in his hand.²³ In fact, he was laying low in Dartmouth in 1660, and it is unlikely that anyone of real influence would not have been amongst the 82 members of the two Councils. Historians have been critical of these bodies, which suffered even more than the 1650-1 Council from 'the presence of too many experts, none of whom was interested in each other's knowledge'.²⁴ Colonial and commercial affairs were soon back in the hands of privy councillors, but the crown had not abandoned the hope that its control over these expanding areas might be more effectively harnessed by some sort of council, although merchants were still rather distrusted. This attitude would eventually allow Worsley to

²⁰ Ibid., pp. 68-70.

²¹ Harper, The English Navigation Laws, pp. 50-60.

²² Bliss, Revolution and Empire, pp. 106-111.

²³ This attribution was apparently first made in L.F. Brown, *The First Earl of Shaftesbury* (New York & London: D. Appleton-Century Co., 1933) p. 131. The manuscript in question is in Thomas Povey's manuscripts, BL Egerton MS 2395, fol. 268r.

²⁴ A.P. Thornton, *West-India Policy under the Restoration* (Oxford: Clarendon Press, 1956) p. 9; Andrews, "British Committees", pp. 74-85.

return to the position he had held under the Commonwealth, acting as an intermediary between the state and the world of commerce, as secretary to a new commercial council.

Worsley had to wait until 1668 to return to state service, however, by which time the initial strength of royalist reaction had waned somewhat. In 1661, this was in full force, perhaps explaining why Worsley was apparently seeking a means to leave England altogether, for the relatively more tolerant New England. A chance to secure employment overseas arose on 18 September 1661, when John Winthrop junior, the governor of Connecticut and correspondent of Hartlib, arrived in London on a mission to secure a charter for his colony from the monarchy.²⁵ By then Worsley was edging back to London, living in Highgate but travelling to the city twice weekly, where he rented a room in Blackfriars.²⁶ Even before Winthrop's arrival, Worsley had written a note to Hartlib asking that he inform Winthrop that 'the Court are vpon sending a Governor unto new England', and that he should therefore secure 'some Interest' at court. To this end, Worsley directed Hartlib to put his name forward as one who 'hath much the eare of the Chancellor', adding that 'in reference to the Plantations he is privy to most Transactions'.²⁷ Hartlib faithfully repeated Worsley's self-eulogising description of himself as 'a Civill man', expert 'in all things relating to publicke good Iust Lyberty of Conscience and any sort of ingenuus kinde of improvement', in a letter to Winthrop of 9 October, and soon afterwards they met.²⁸

²⁵ R.C. Black, *The Younger John Winthrop* (New York & London: Columbia University Press, 1966) pp. 206-226.

²⁶ Winthrop himself stayed in Coleman Street, where Worsley had lived in the 1640's. Ibid., p. 212.

²⁷ Note, Worsley to Hartlib, c. September 1661. HP 33/2/27A.

²⁸ Letter, Hartlib to Winthrop, 9 October 1661, in R.C. Winthrop (ed.) "Correspondence of Hartlib, Haak, Oldenburg and others of the founders of the Royal Society, with Governor Winthrop of Connecticut, 1661-72", *Proceedings of the Massachusetts Historical Society* (Boston, 1878) pp. 215-6; Black, *The Younger John Winthrop*, p. 215.

Hartlib also reported that Worsley was about to be sent as a royally-appointed agent to the plantations, but this might be another example of Worsley's tendency to inflate his importance when seeking employment or patronage, this time from Winthrop.²⁹ The one real piece of evidence connecting Worsley to Clarendon at this time is rather misleading, namely the biographical account he wrote to Lady Clarendon in November 1661, 'to acknowledge that Countenance my Lord Chancellor hath beene pleased at all times hitherto to honor me with'.³⁰ Evidently Worsley had become

acquainted with Clarendon, perhaps through Robert Boyle who knew him personally, and who was a member of the Council of Plantations.³¹ However, the content of the letter suggests that Worsley had been exaggerating his influence, which led to some 'suggestions' being directed to Clarendon about Worsley's questionable past. Allegations centred on Worsley's Irish career, with Sir Charles Coote (now the Earl of Monrath) his main slanderer, whom Worsley condemned as a lukewarm defender of the Protestant interest in Ireland.³² By contrast, Worsley presented his own career as one of 'publicke service', rather than devotion to any particular regime: it was an explanation which could at once justify his republican career, and his change of allegiance to the monarchy.

Winthrop was apparently unruffled by any allegations against Worsley, whom he took into his confidence, not as an advisor in New England, but to assist in settling the boundary dispute between Connecticut and its neighbour Rhode Island.³³ Boyle had been acting as an arbitrator between Winthrop and his rival claimant, Dr John Clarke, in

²⁹ Letter, Hartlib to Winthrop, 3 September 1661. Printed in Winthrop (ed.) "Correspondence of Hartlib, ..., with Governor Winthrop of Connecticut, 1661-72", p. 214. ³⁰ Letter, Worsley to Lady Clarendon, 8 November 1661. Bodleian Library, Clarendon MS 75, fol. 300r.

³¹ For Boyle's work on this Council, J. R. Jacob, Robert Boyle and the English Revolution, A Study in

Social and Intellectual Change (New York: Burt Franklin & Co, 1977) pp. 144-148.

³² Letter, Worsley to Lady Clarendon, 8 November 1661. Bodleian Library, Clarendon MS 75, fol. 300v. ³³ For the origins of the dispute, Black, *The Younger John Winthrop*, pp. 226-231.

their meetings with Clarendon in summer 1662, and in the following March Worsley was nominated by Winthrop to sit on the committee which would resolve the dispute.³⁴ He signed the agreement reached on 7 April 1663, alongside another former Hartlibian, Sir William Brereton, whilst William Potter was a witness.³⁵ Several papers relating to this dispute in Worsley's hand exist in the Winthrop papers, and Winthrop left the relevant papers with Worsley following his departure to Connecticut soon afterwards.³⁶ Although this was not an official state position, this probably went some way to restoring Worsley's reputation, and by November 1662 he was confident enough to write a certificate to the Duke of Albermarle on behalf of an old Baptist associate from Ireland, Samuel Goodwin, who was being held in the Tower 'upon suspition of holding Correspondencie with Colonell Ludlow'.³⁷ Attesting to Goodwin's character, Worsley explained that he had recommended him to a merchant friend who was looking for a factor to reside in Barbados.³⁸ The Restoration had of course prompted a new wave of emigration to the colonies by dissenters, and Worsley's connections with Barbados would provide the opportunity for his next venture.

Almost two decades earlier, Worsley's ascent in state service began with the saltpetre project. Continuing the scatological theme, in the 1660's Worsley turned to the

³⁴ Ibid., p. 241; J.M. Sosin, *English American and the Restoration Monarchy of Charles II* (Lincoln & London: University of Nebraska Press, 1980) pp. 100-102. See also Boyle's letter to Winthrop, 28 December 1661. Printed in Boyle: *Correspondence*, Vol. 1, p. 472.

³⁶ Letter, Winthrop to Brereton, 6 November 1663. Printed in Ibid., p. 86. The papers in Worsley's hand are in the Winthrop Papers at the Massachusetts Historical Society (Microfilm Reel 7). See also Black, *The Younger John Winthrop*, p. 242.

³⁵ "Letters of John Winthrop Jnr 1626-7 – 75-6", Collections of the Massachusetts Historical Society, Vol. 8 (Boston, 1882) pp. 82-3.

³⁷ Goodwin's petition. PRO SP 68, fol. 327r; Greaves, Deliver us from Evil, p. 115.

³⁸ Worsley's certificate, dated 1 November 1662. Ibid., fol. 330r.

production of an exotic laxative, senna. Whereas in 1645 he had sought to administer a purgative to the body politic, turning its waste products to useful profit, now Worsley's ambition was to cure the King's constipation, although this too would have national benefits. In 1663, he began to discuss his intention to cultivate senna in the plantations with certain Anglo-Irish patrons, namely Lady Ranelagh, her brother the Earl of Burlington, and Sir John Clotworthy, now the Viscount Massereene, as well as Sir William Brereton and Francis Lord Willoughby, Governor of Barbados and the Leewards.³⁹ Having received their encouragement, Worsley purchased a number of senna seeds to experiment with, and by June 1664 was able to show the results to Charles II, 'Who was pleased not only to approve of it, but to ingage his Royall word that if I did perfect it; As I should finde all incouragement from his Majestie in it, soe that no other beside my selfe should enjoy the benefit of it'.⁴⁰ Worsley's progress was disrupted by the outbreak of plague in the following year, which forced him to leave London for 8 months, but not before he had sent samples to be planted by an agent in Barbados. By September 1666 he had received 'some of the senna ripe and cured', which he subjected to further trials.⁴¹ Soon afterwards Worsley presented the King with a parcel, who received it 'not only pleasedly, but greedily, and much complimented its presenter'.⁴² Having earned a similar response from the royal physicians, Sir Alexander Fraser and Dr Thomas Coxe, Worsley set about drafting a formal petition, apparently

³⁹ See Worsley's Memorandum to William Lord Willoughby, 22 January 1668, in 'The 1661 Notebook of John Locke', Bodleian Library Microfilm 77, p. 263; 'Severall reasons humbly tendered...for the encourageing of the plantation of Senna', c. March 1668. PRO CO 1/20, fol. 283r.

⁴⁰ Memorandum to William, Lord Willoughby, 22 January 1668, in 'The 1661 Notebook of John Locke', Bodleian Library Microfilm 77, p. 263.

 ⁴¹ Letter, Lady Ranelagh to Boyle, 12 September 1666. Printed in Boyle: Correspondence, Vol. 3, p. 235.
 ⁴² Letter, Lady Ranelagh to Boyle, 18 September 1666. Printed in Ibid., p. 239.

with Clarendon's advice.⁴³ Therefore by the time he addressed his petition to the King, on 30 October 1666, Worsley had gone to considerable lengths to ensure its success.

Worsley's petition cited the commercial benefits of cultivating senna, as well as 'other Comodites, belonging to Turkey'.⁴⁴ In his saltpetre petitions, Worsley highlighted the benefits of domestically producing a commodity currently imported at bullion draining cost. The goal of national self-sufficiency also informed English colonisation, but this had suffered 'manifest Losse & miscarriage in all the Comodities wee have hitherto planted for want of due Regulation of them'. In particular, the unrestrained planting of tobacco had led to over-production and falling prices, bringing financial ruin to many planters. Worsley could therefore justify his patent as a means to regulate the production of one potentially valuable crop, which was previously only available from the Levant. However, Worsley denied that he was seeking a normal 14-year monopoly patent: instead, he requested a 12-year 'lease' of a royal-license to plant senna, which would be used to regulate this commodity in the long-term. Furthermore, its sale would be tightly regulated, and Worsley suggested that all of the senna imported from the colonies should be collected into a general store for inspection by royal physicians, and then sold at a comparable price to Alexandrian senna. The latter would only be admitted once this colonial stock had been sold, avoiding a glut in the market and the price-falls that had plagued the tobacco market.

It was argued in Chapter 1 that projects, and the privileges which projectors requested, were a way by which state power was extended into new, particularly economic, areas. In the saltpetre project, state power was at the disposal of parliament,

⁴³ Memorandum to William, Lord Willoughby, 22 January 1668, in 'The 1661 Notebook of John Locke', Bodleian Library Microfilm 77, p. 264.

⁴⁴ Petition for a senna patent, 30 October 1666. PRO CO 1/20, fol. 282r.

to which Worsley directed his petition. By contrast, in 1666 Worsley asked the crown to accept the 'Comoditie of Senna as properly belonging to your Majesty, & as your Majestys peculiar & Inherent Right', to be regulated 'as shall seem best to your Majestys Wisedome'. Worsley even offered to pay a rent, as 'Acknowledgement of your Majestys Sole Right in & to the said Commoditie'. Clarendon himself could hardly have offered a better depiction of the traditional royalist economic order, where the crown regulated commerce by prerogative right, contracting with its subjects to monopolise certain trades in return for concessions on a personal, rather than legislative, basis - a far cry, perhaps, from the rhetoric of public interest of the saltpetre project. However, despite its royalist bias, the senna petition was in fact presented in similar terms to its Civil War precursor, as an act of 'publick service'. A commodity like senna might belong to the monarch, but this was conditional on it being regulated to serve the public good. Public power would be invested in Worsley acting simultaneously as a private individual and an agent of the state, a 'public-private partnership' which he later justified by claiming that 'the plantation of any new Commodity within our plantations can never possible be expected unless undertaken by the Industry & Ingenuity of some private and perticuler persons'.⁴⁵ However, such initiatives involved much 'charge hazard Patience and Expence', and therefore required assurance that others 'who have been at no such industry' would not 'reap the equal benefitt of such an improvement': otherwise, it could not be 'rationally expected that any such undertakeing againe shall or will at any private mans charge be ever at any time attempted'.

⁴⁵ 'Severall reasons humbly tendered ... for the encourageing of the plantation of Senna By a pattent or by An Act of Parliament', c. March 1668. PRO CO 1/20, fol. 283v.

By then Worsley had apparently become frustrated with the crown's failure to grant his patent: he was still awaiting a response from the Attorney-General, George Palmer, in 1668, and in order to speed things up, sent an account of the project to William Lord Willoughby, who had succeeded his brother Francis as governor in Barbados.⁴⁶ Worsley also addressed a second memorandum to Palmer, restating his case for a patent and emphasising 'the benefitt of such an undertakeing to the publick'.⁴⁷ The project would not only improve the plantations, but would also reduce 'our expence of money into forraigne parts', and, by adding to the stock of colonial goods traded into England, would 'Give the greater encouragement not only to our shipping But to our Merchants and Planters to goe thither'. Colonial trade would compensate for the 'want of trade ... ariseing in part from the decay of our Drapery and woollen manufacture'. Here in miniature was the argument that he would later put to certain statesmen, with some impact. For now, Worsley stressed the need to regulate senna carefully, ensuring that it was not 'promiscuously' planted and therefore 'spoyled & abased'.⁴⁸ However, he was by now willing to accept a conventional patent, and accordingly Palmer reported that this should be the case, with 'the other matters petitioned for' being left to parliament's consideration. Finally a warrant for a 14-year patent was issued, on 12 August 1668, although (like the saltpetre project before it) there is no evidence that Worsley prosecuted these privileges.⁴⁹

⁴⁶ Memorandum to William, Lord Willoughby, 22 January 1668, in 'The 1661 Notebook of John Locke', Bodleian Library Microfilm 77, pp. 263-5. Willoughby had arrived in Barbados in April 1667, and presumably Worsley was expecting him to favour the plantation of a new commodity on the island, which would be 'Merchant*isea*ble when it comes over hither'. Ibid., p. 265.
⁴⁷ 'Severall reasons humbly tendered ... for the encourageing of the plantation of Senna By a pattent or

⁴⁷ 'Severall reasons humbly tendered ... for the encourageing of the plantation of Senna By a pattent or by An Act of Parliament', c. March 1668. PRO CO 1/20, fol. 283r.

⁴⁸ Ibid., fol. 283v.

⁴⁹ CSPC, 1661-1668, p. 604.

In fact, it seems that Worsley's senna project had fulfilled the same function as saltpetre had done before, allowing him to advertise his qualities to admiring patrons and politicians, particularly those who were on the rise since the fall of Clarendon in 1667. This event was connected to the aftermath of the Anglo-Dutch war, which entailed commercial depression as well as a political shift - 'the crisis occasioned by the Second Dutch War and the fall of Clarendon opened the way for new adventurous policies', notably with regard to commerce.⁵⁰ Thus in 1668 Worsley found that there were both individuals willing to listen to his arguments about the importance of colonial trade, and a commercial situation which made it appear important to act on them.

The Restoration politician with whom Worsley has most often been associated is Sir Anthony Ashley Cooper, Lord Ashley and from 1672 Earl of Shaftesbury. However Worsley never attained the level of trust which John Locke did with this, or indeed any other, politician, instead offering advice to several leading 'Cabal' statesmen, including Lord Arlington and the Duke of Buckingham. In late 1666 he had some meetings about commercial affairs with Viscount Conway- actually a supporter of Ashley's rival, Ormond- who described him as 'a person of great ingenuity' with 'great acquaintance among the Dutch merchants'.⁵¹ His senna project also brought him to the attention of the King, with whom he discussed the production of what was fast becoming England's most valuable colonial staple: sugar.⁵² Worsley suggested to Charles II 'how much of

⁵⁰ Kelly, "Introduction" to Locke on Money, p. 5.

⁵¹ Letter, Conway to Sir George Rawdon, 27 November 1666. Printed in HMC, *Hastings*, Vol. II (London, 1930) p. 874. The precise subject they discussed was probably the granting of liberty of conscience in Ireland which, as Conway reported, would 'draw over the soberest part of this nation' to Ireland'.

⁵² For the introduction of sugar into the West Indies, C. & R. Bridenbaugh, *No Peace Beyond the Line. The English in the Caribbean 1624-1690* (New York: Oxford University Press, 1972) pp. 69-100.

Import it might be to his affairs either to agree upon a Regulation of Sugars with the King of Portugall; or to take such an effectuall order within our plantations ... as that the Portugeez might be wholly discouraged and beaten out of the trade'.⁵³ He drafted a lengthy paper describing the second, more aggressive course of action with particular reference to Jamaica, possibly addressed to Buckingham in summer 1668.⁵⁴ Although Jamaica had escaped the ravages of the Second Anglo-Dutch war, it remained in a vulnerable and underdeveloped state.⁵⁵ Worsley was not alone in arguing that it had the potential to become the most profitable West Indian colony, but the case still needed to be made for persevering with its settlement.

In order to highlight the importance of sugar to England, Worsley turned once again to the persistent example of Dutch commercial might. Twenty years earlier, he had noted that Amsterdam's prosperity was built on profits from the East Indies, and he had not changed his opinion since then:

As the great & extraordinary power of the East India Company of Holland doth sufficiently appeare not onely in the standing Garrisons they maintaine, and in the Fleet they have been able upon all occasions to set forth in the East Indies; but in the warrs which they have at severall times waged with some of the most Puissant & Civilized Princes of these Countries soe the one single instance sheweth us not onely what a Nation, but even what a number of

⁵³ Memorandum on 'The peculiar advantages *which this Nation hath by the trade of our plantations*', addressed to Lord Ashley, 14 August 1668. PRO 30/24/39, fol. 251v.

⁵⁴ The only copy of this paper is included in 'The 1661 Notebook of John Locke', Bodleian Library Microfilm 77, pp. 215-219, 232-252, along with other Worsley material, and although it is unsigned, it was certainly written by Worsley. On page 237 he made the claim the quantity of sugar currently imported into Europe was so great that a variation of its price by one farthing in the pound amounted to £40,000, which he repeated in his letter to Ashley of 14 August 1668 (fol. 224v), cited above, and apparently also to the King. The paper also makes references to the Englishmen wishing to depart from Surinam (p. 242), and this colony had been transferred finally to the Dutch in April 1668. Summer 1668 seems therefore a probable date. The recipient is assumed to be Buckingham because he is addressed as 'your Grace' throughout, and because Worsley wrote two more lengthy papers regarding Jamaica to the Duke, in 1668-9.

⁵⁵ Thornton, West-India Policy under the Restoration, pp. 39-66.

private persons (by agreeing togeather to make use of the advantages of trade) may if they will, doe; to render themselves considerable abroad in the World.⁵⁶

Dutch success rested on the size of the 'Capitall Stock' invested in the trade, combined with the physical control they were able to exert over markets and trade routes, with 'Plantations Garrisons and Strength'.⁵⁷ Thus they had been able to monopolise 'the trade of the Molluccoes, Ceylon, for Japan' and elsewhere, eventually 'ingrossing into their own hands the sole disposeing of a very fast Bulk of certain Comoditys'.⁵⁸ Political strength brought commercial advantages, which in turn made the East Indies strategically vital to the States General, who relied on customs, fines, and borrowing from the Company. In fact, 'the upholding of the Company is sole much the joint and united concerne of all the provinces that ... there is not a greater Cement ... In all theire whole Government'.⁵⁹ This was because the joint-stock status of the East India Company allowed non-merchants to invest and partake in its profits, so that 'the Interest of the said Company is manifestlie linked or weaved with the Interest of the whole Nation it selfe'.⁶⁰

Worsley had not offered this eulogy to the VOC to argue on behalf of promoting its English counterpart, however. Although this trade alone was sufficient to be 'a super-balance to all Christendome', Worsley did not suggest that England should concentrate its commercial energies on the East Indies.⁶¹ The strength of the Dutch there was such that the English had little hope of becoming 'proportionable to them'. As well as dominating this trade, Dutch commercial power was supported 'by their Herring

⁵⁶ Paper on Jamaican sugar, addressed to the Duke of Buckingham, c. summer 1668? In 'The 1661 Notebook of John Locke', Bodleian Library Microfilm 77, p. 215.

⁵⁷ Ibid., p. 216.

⁵⁸ Ibid., p. 232.

⁵⁹ Ibid., p. 231.

⁶⁰ Ibid., p. 232.

⁶¹ Ibid., p. 233.

Fishing, ... their Cloathing; as alsoe by theire ingrossing of the whole Greenland and Russia Trade from us'.⁶² Against this seemingly indomitable array of assets, and given 'the great improbability ... That we shall effectually set upon the Fishing or that wee shall ever recover our Woolleen Manufacture', colonial trade was all that England had left to counterbalance the Dutch.⁶³

England's commercial future lay in the West, and not the East Indies, therefore. But Worsley had analysed the power of the VOC not just as a warning, but as an example of how to conduct the American trade, one lesson being that 'the prudence even of private persons, when manageing of trade justly and adventagiously for the good of the Common Interest; may ... rise, stengthen and increase even the Government it selfe which they are under'.⁶⁴ It was in consortium with private merchants, therefore, that the state should seek to advance colonial trade. This might suggest that Worsley was in favour of erecting some sort of trading company for the West Indies, as Povey and Noell had argued for in the 1650's.⁶⁵ However, elsewhere Worsley cited as a particular benefit of colonial trade the fact that it was not 'stinted to any Company'.⁶⁶ Rather, the form of regulation he had in mind centred on particular commodities, especially sugar, whose defence should be 'as stricktly made an act & designe of State among us, As the improveing of the Cloth was formerly, or as the keeping up of the East India Trade & of the Monopoly of spice is now among the Hollanders'.⁶⁷ Worsley went on to calculate the quantity of sugar consumed in Europe (at least 20,000 tonnes

⁶² Ibid., p. 233.

⁶³ Ibid., p. 235.

⁶⁴ Ibid., p. 218.

⁶⁵ Andrews, "British Committees", pp. 53-5; Bliss, Revolution and Empire, pp. 68-70.

⁶⁶ Memorandum on 'The peculiar advantages *which* this Nation hath by the trade of our plantations', addressed to Lord Ashley, 14 August 1668. PRO 30/24/39. fol. 222v.

⁶⁷ Paper on Jamaican sugar, addressed to the Duke of Buckingham, c. summer 1668? In 'The 1661 Notebook of John Locke', Bodleian Library Microfilm 77, p. 235.

yearly), and the amount of land necessary to produce this amount (4-5,000 acres), which Jamaica could easily provide.⁶⁸ West Indian sugar would sweep away its Brazilian rival, which was encumbered by high customs and confined to a company charging excessive freight rates. Despite their strong presence in the West Indies, neither the French nor the Dutch had made much progress in erecting sugar-works.⁶⁹ Only careful management was necessary in order 'to make us the sole Masters of Sugar to all the world'.⁷⁰

Worsley's suggestions focussed on granting privileges to encourage sugar cultivation on Jamaica, including the easing of taxes on planters, an expedient which had occasionally been granted throughout the 1660's.⁷¹ Two decades earlier, Worsley had considered setting up a sugar-grinding business in the West Indies: now, he suggested the encouragement of the colonial sugar processing industry as state policy.⁷² Refined sugar was lighter and therefore cheaper to ship than coarse, whilst too much raw sugar was being re-exported, only to be refined by foreigners, in the same way that the Dutch had traditionally finished English white cloths.⁷³ The state could also advance this trade by ensuring the removal of Dutch and French impositions on English sugar, if necessary by retaliation.⁷⁴ He opposed the Guinea Company because their slaves cost more than those offered by the Dutch. Even better than relying on the Dutch, however, would be to grant a patent to trade in slaves on the River Corentyne, in Guiana,

⁶⁸ Ibid., pp. 237-9. Worsley in fact under estimated the level of demand for sugar, and the potential yield of the West Indies. In the 1660's, sugar imports from the West Indies amounted to 10,000 tonnes p.a.; by 1700, the figure was 24,000 tonnes. Clay, *Economic Expansion and Social Change*, II, p. 169.

⁶⁹ Paper on Jamaican sugar, addressed to the Duke of Buckingham, c. summer 1668? In 'The 1661 Notebook of John Locke', Bodleian Library Microfilm 77. pp. 240-3.

⁷⁰ Ibid., p. 243.

⁷¹ Ibid., p. 245; Bliss, Revolution and Empire, p. 141.

⁷² For colonial sugar production, Thornton, West-India Policy under the Restoration, p. 143.

⁷³ Paper on Jamaican sugar, addressed to the Duke of Buckingham, c. summer 1668? In 'The 1661 Notebook of John Locke', Bodleian Library Microfilm 77, p. 246.

⁷⁴ Ibid., p. 251.

providing a cheap and convenient source.⁷⁵ With all these expedients taken care of, Worsley looked forward to the sugar trade amounting to £1,000,000 annually.⁷⁶

Worsley continued to advise Buckingham on Jamaica until at least 1669, but this paper may have helped to bring him to the attention of a statesman much more interested in the colonies, Lord Ashley. Ashley had been involved in colonial and commercial affairs both privately and publicly since the 1650's, but there is no evidence that they knew each other before 1668.⁷⁷ However. Worsley did address two important papers, on colonies and councils of trade, to him, and it is not hard to see why: Ashley was more involved in these areas than any other Restoration statesman, and 1667-73 were his peak years.⁷⁸ Thus it comes as no surprise that Ashley asked Worsley to produce 'something for the restoring of our trade that might be as acceptable to the Nation as ... to his Majesty', which he did in the form of a paper dated 14 August 1668, two days after the warrant had been issued for his senna patent.⁷⁹ Entitled 'The peculiar advantages which this Nation hath by the trade of our plantations', this is the most well known of Worsley's Restoration papers: Arlington owned a copy, and Locke copied it into his notebook.⁸⁰ Here, Worsley persuasively argued that colonial trade was the only way to compensate for the decline of English cloth- an argument which, according to Kelly, probably had some bearing on Locke's similar ideas.⁸¹

⁷⁵ Ibid., p. 244-5.

⁷⁶ Ibid., p. 251. This was an exaggeration: by 1686, sugar imports to London from the West Indies amount to £586,528. N. Zahedieh, "London and the colonial consumer in the late seventeenth century", *Economic History Review*, XLVII, 2 (1994) p. 246.

⁷⁷ Brown suggests that their acquaintance went back to the 1650's, but presented no evidence. *The First Earl of Shaftesbury*, p. 130.

⁷⁸ Ibid., pp. 128-149; Haley, *The First Earl of Shaftesbury*, pp. 227-264; Rich, "The First Earl of Shaftesbury's Colonial Policy", pp. 47-70.

⁷⁹ Memorandum on 'The peculiar advantages *which this Nation hath by the trade of our plantations*', addressed to Lord Ashley, 14 August 1668. PRO 30/24/39, fols. 221-227.

⁸⁰ Arlington's copy is probably that at Bodleian Library, MS Rawlinson A478, fols. 65-72. Another copy is in 'The 1661 Notebook of John Locke', Bodleian Library Microfilm 77, pp. 16-17, 158-171. The Rawlinson copy is printed, although not fully, in T & C, pp. 533-537, without the author being attributed.
⁸¹ Kelly, "Introduction" to Locke on Money, pp. 10, 52-3.

Colonial enterprise had long been intended to create a trading system which would benefit only Englishmen, but it took the Navigation Act of 1651 to make this into reality. Thus Worsley presented a detailed account of the benefits of trading within an enclosed market, under one state:

Noe trade can be had with any other Countries; But both the Trader & the trade it selfe is necessarily subject to all such Lawes rules Impositions & Restrictions in the said trade as the Government of that Countrey (what ever it be) shall for its owne interest thinke fit to lay upon it; whereas in our own plantations The trade being wholly within his Majesty's dominions It is subject to noe other law or Imposition then what shall upon due deliberation be thought best for the publicke Weale of the nation nor can any that are forraigners trade at all in Them, without leave first had from his Majesty which his Majesty having prudently thought fitt to debarr them of...⁸²

Thus the benefits of colonial trade were 'appropriated to ourselves & alone exclusive to all others', and 'The freight both outward & homeward of all the whole trade be it never soe great, is still within ourselves'. A prevailing concern of the 17th-century discourse of trade was that it was possible to lose, as well as gain, by international trade, and Worsley's discussion shows how the development of colonial political economy was shaped by this perspective.

Colonies had two principal roles: to produce commodities which could not be grown in England, and to consume English exports. Whereas in terms of the balance of trade, imports were seen as consuming national wealth (unless re-exported), in the colonies they were an advantage: colonial consumption provided a market for numerous English manufactures which were uncompetitive in Europe, enriching English merchants and producers alike. As for English consumption, Worsley recognised that sumptuary laws were ineffective in curtailing the people's appetites, also tending to

⁸² Memorandum on 'The peculiar advantages *which* this Nation hath by the trade of our plantations', addressed to Lord Ashley, 14 August 1668. PRO 30/24/39, fol. 221r.

'allaram other Nations that are about us, & by minding them to follow the same president doe in the end hurt us'.⁸³ But the problem would disappear if the colonies were able to supply these needs, thus simultaneously enriching themselves whilst preventing the export of bullion, and even tipping the balance of trade in England's favour if these commodities were exported abroad.⁸⁴ Both of these arguments were commonplace, but as prosperity increasingly came to be identified with population, colonies were often accused of draining productive hands which would otherwise be put to use in domestic industry or agriculture.⁸⁵ To counter this, Worsley stressed the unity between England and its colonies: rather than being a drain, colonial emigration thus redistributed labour to where it could be most productive, so that 'it is the Empire of England likewise that is hereby rendered more August formidable & Considerable abroad'.⁸⁶ Only colonisation was able to advance the trade and territory of England at once, expanding its borders into vast unexploited lands, soon to be populated by prosperous generations of Englishmen. Colonial trade exercised a similarly good influence on the health of the body politic at home: unlike other trades, its benefits were confined neither to companies nor the capital, and so 'doth not as some other trades swell one part of the Kingdome and make the rest feeble & leane'.⁸⁷

⁸⁴ Ibid., fol. 221r-v. In 1686, imports from America into London amounted to almost £900,000, whilst exports from London to the colonies were over £200,000. N. Zahedieh, "London and the colonial consumer in the late seventeenth century", *Economic History Review*, XLVII, 2 (1994) pp. 242, 250-1.

⁸⁵ See e.g. [S. Bethel], An Account of the French Usurpation upon the Trade of England (London, 1679) p. 16: 'I cannot observe, that it doth any ways comport with the interest of State, to suffer such multitudes of people to pass out of his Majesties Kingdoms into other Princes Dominions, or the Western Plantations, thereby to disfurnish ourselves of people'. See also R. Coke, A Discourse of Trade (London, 1670) pp. 8-13; C. Reynell, The True English Interest (London, 1674) pp. 88-92.

⁸³ Ibid., fol. 222r.

⁸⁶ Memorandum on 'The peculiar advantages *which this Nation hath by the trade of our plantations*', addressed to Lord Ashley, 14 August 1668. PRO 30/24/39. fol. 224r.

⁸⁷ Ibid., fol. 222v. Worsley especially noted those West Country towns which traded to the colonies, amongst them Dartmouth which of course was the home-town of his wife's merchant family. The actual composition of the Atlantic trade is instructive: analysis of the London port books of 1686 show that although 1,800 people were involved in colonial trade, a group of 61 merchants controlled more than a third of the main branches of this commerce. N. Zahedieh, "Making Mercantilism Work: London

Culturally, too, there were benefits from trading with other Englishmen rather than foreigners. Partly these were a matter of convenience, avoiding linguistic differences or the need to recruit foreign factors. More pertinently, merchants who resided in foreign states were 'subject to the Customes & Lawes of the said Country ... how uncouth, strange, or disagreeable soever those Customes are'. This statement reflects an underlying unease about the merchant, whose trans-national status meant that he could be blamed for wasting the nation's stock in unprofitable trades, sacrificing the public good for his own private interests or, worse still, those of another nation. The discourse of trade as a whole can almost be read as a debate about the location of merchants in relation to the body politic, with merchant writers keen to demonstrate the benefits of their trades to the nation and thus identify themselves as patriotic members of the commonwealth.⁸⁸ Although they succeeded in elevating the reputation of their trade, merchants were still not trusted to govern their own affairs, and Worsley's fear that those residing abroad would eventually 'become aliens in theire owne Country & by degrees contract an Interest & affection that is forreigne', suggests that were far from secure members of the commonwealth. By contrast colonial merchants, living amongst their countrymen, were immune from such contamination.⁸⁹

Merchants and Atlantic Trade in the Seventeenth Century", Transactions of the Royal Historical Society, 6th series, IX (1999) p. 146.

⁸⁸ See A. Finkelstein, Harmony and the Balance. An Intellectual History of Seventeenth-Century English Economic Thought (Ann Arbor: University of Michigan Press, 2000) pp. 24-5. The classic case of this was the East India trade, which seemed to drain English bullion in return only for luxury goods, and which Thomas Mun defended in A Discourse of Trade, From England to the East-Indies (London, 1621). Mun went to great pains to eulogise the position of the merchant as good patriot, in Englands Treasure by Forraign Trade (London, 1664), and pamphleteers continued to state the need to actually honour merchants, in particular by encouraging members of the gentry to take up trade, in the following decades. But still, in 1681, one author felt it necessary to present a defence of the East India trade as 'the most National of all Foreign Trades': 'Philopatris', A Treatise Wherein is Demonstrated, That the East-India Trade is the most National of all Foreign Trades (London, 1681).

⁸⁹ For the themes of this paragraph, see Gauci, *The Politics of Trade*, pp. 156-193. For the way in which colonial merchants integrated the disparate parts of empire in the 18th-century, D. Hancock, *Citizens of the World. London merchants and the integration of the British Atlantic community*, 1735-1785 (Cambridge: Cambridge U.P., 1995).

In fact, perhaps the greatest advantage of trading within this English empire was its status as a single legal entity. The Navigation laws created a mare clausum in the sense that they extended English law over the seas, so that from the point when they were loaded up until they finally reached foreign ports, colonial goods were legislated for.⁹⁰ The traditional overseas merchant had to trade within at least three legal conditions- under English laws, under those of the nation he traded into, and in the contested space in between, which was regulated by often tenuous commercial agreements between nations. Commonwealths, as Locke knew, were surrounded by the state of nature, but the imperial state was sovereign of its surrounds.⁹¹ This allowed a more universal approach to commercial legislation than possible elsewhere, allowing those 'defects in the manageing hitherto of our Plantations' which Worsley discussed in the second half of the paper to be effectively remedied. Despite belonging to England, the plantations had not been managed to the best advantage. Despite the efforts of various councils of trade, it was still the case that 'the trading part is left to itselfe; noe order, method or Councill otherwise then for every mans private advantage being used or observed in it'.⁹² Thus arose a familiar litany of defects: the overproduction of staples, the failure to diversify colonial production or to fully enclose those lands in English possession, which 'Considering the Genius of our nation', could be accounted 'as a Blemish or Reproach to us'.⁹³ The political economy of the senna project therefore

⁹⁰ On efforts to assert British imperial domination of the seas, D. Armitage, *The Ideological Origins of the British Empire* (Cambridge: Cambridge U.P., 2000) pp. 100-124.

⁹¹ As Locke put it: 'For though in a commonwealth the members of it are distinct persons still in reference to one another, and as such are governed by the laws of society; yet in reference to the rest of mankind, they make one body, which is, as every member of it before was, still in the state of nature with the rest of mankind...So that under this consideration, the whole community is one body in the state of nature, in respect of all other states or persons out of its community'. J. Locke, *Two Treatises of Government*, ed. M. Goldie (London: Everyman, 1993) p. 189.

⁹² Memorandum on 'The peculiar advantages which this Nation hath by the trade of our plantations', addressed to Lord Ashley, 14 August 1668. PRO 30/24/39, fol. 223r.
⁹³ Ibid., fol. 223v.

became a blueprint for wider colonial regeneration. Other remedies included redistributing population southwards by encouraging emigration out of New England, 'the nursery of all unto the Rest of our plantations'.⁹⁴ To ensure the effectiveness of these reforms, a greater effort would be made to enumerate the benefits of the plantations to English trade.

Compiling such statistics would be one task of a colonial council. Worsley specified the fundamental defect in colonial government as a 'want of such an authority to whom all the plantations should in theire Customes & Governments be subject unto', which would also 'improve that trade ... for the benefitt of the whole & of his Majestys Government in generall'.⁹⁵ Such a body could reconcile the interests of those various parties involved in colonisation, arbitrating when 'one of these parties be suffered to wrong injure or oppresse the other'.

Colonial trade was by now of such significance that it demanded a council to itself, and this reflected Worsley's understanding of recent commercial history. Earlier in the paper, he had cast his mind back to the economic situation of his youth, when English cloth was still valued enough to be exported into Holland itself. The declining status of English drapery had been masked by gains made at the expense of warring Holland and Spain, in the Mediterranean and Iberia. But the Peace of Westphalia had shattered this false position, so that the Dutch- as he had warned at the time- became 'manifestly risen in theire trade beyond us and wee sensibly growne to a decay in our stock and our trade'.⁹⁶ Now 'nothing offers it selfe to view by which wee may recover

⁹⁴ Ibid., fol. 224r.

⁹⁵ Ibid., fol. 225r.

⁹⁶ Ibid., fol. 222r.

our trade again, if we shall pursue the same methods of trade now that wee have formerly only been accustomed unto'.

Worsley had no doubt that Europe had entered into a new commercial era, a consideration which filled him with 'some Anxiety', for it was by no means sure whether this would be to his nation's benefit.⁹⁷ England was surrounded by hostile rivals:

For if our Neighbours have soe well considered the Consequence of trade as that they find if a new Monarchy be to be set up in the World It can be set up by no other way then by trade because not to be effected without a large Aggreagation of sea force Or if a Monarchy be to be hindered it can be noe other way prevented then either by getting into a Course of trade themselves & giving the highest Countenance & promotion that may be possible to it; Or by entring into consideration with others whose Interest leads them most principally to pursue it. I say my Lord if it have been thus thoughtfully minded by our neighbours It cannot without an apparent hazard be any longer neglected by ourselves ...⁹⁸

Given this situation, England must either 'Lead a party & make our selves the formost in this great affaire of shipping & Commerce', or else be forced 'to follow ... the interest of such who shall ... gett the start of us'. Although Dutch commercial power still alarmed him, Worsley was by now more fearful of the pretensions of the King of France, and thus implicitly supported England's Triple Alliance with the United Provinces and Sweden.⁹⁹ As well as such diplomatic moves, reason of state called for the more rational and effective government of trade, and this was the subject of another paper written to Ashley. A Council of Trade was founded in October 1668, and so

⁹⁷ Ibid., fol. 225r.

⁹⁸ Ibid., fol. 225v.

⁹⁹ For Worsley's suspicions of France, see below.

Worsley's 'Considerations about the Commission for Trade' was probably written shortly before then.¹⁰⁰ This began by stating that 'the Interest of Commerce though formerly neglected is of late yeares Become an Expresse Affayre of State, as well with the French as with the Hollander and Swede'.¹⁰¹ Following the Anglo-Dutch wars, fought largely at sea, it was now clear that trade, more than territory, was the key 'toward an universall monarchy'- that persistent spectre in the English imaginationexplaining why the European nations had now made commerce 'their Interest & Government':

This seemes to take away all choyce from us, & to lay a necessity now Inevitable upon us That eyther we must leade this great & generall Affayre of state; By making our selves the masters of Commerce or Keeping up an Equality at least in it; Or we must be content to be Lead by it and humbled under the Power of them, that have the Ability Best to Rule it & Governe it./

Just as it had been 20 years before, the difficulty lay in finding the best way to conduct this government. 'Commerce As it is an Affayre of state', Worsley argued, was 'widely different from the mercantile part of it', which concerned purchasing the best goods, freighting ships, finding the best market and negotiating the best price.¹⁰² Private interest was sufficient to guide the merchant, but it was much harder for the state to discern the public good within complex international trade. As a guide, Worsley listed 10 fundamentals of commercial policy, beginning with 'the Publicke Countenancing our Merchants abroad in foreigne Parts As the proper stewards ... of the Publicke stocke Wealth & Interest of the nation'.¹⁰³ Partly this was a matter of upholding mercantile

¹⁰⁰ 'Some Considerations about the Commission for Trade', addressed to Lord Ashley. PRO 30/24/49, fol. 86-89. This is suggested by Worsley's concluding remark, advising that in 'settling this Comision a second Time nothing be omitted that may rationally make it the more effectual'- fol. 88v. ¹⁰¹ Ibid., fol. 86r.

¹⁰² Ibid., fol. 86r-v.

¹⁰³ Ibid., fol. 86v.

privileges abroad and opposing foreign taxes, but equally the state should ensure that English merchants dealt justly, and upheld the 'Credit' of exported manufactures. Care should be taken to ensure that exports were neither undervalued nor priced out of the market, with the same considerations being paid to imports. The state should encourage innovation in production, at the same time considering prudent means to 'discourage, or putt a stop to any of the manufactures of our neighbours', especially those directly competing with English exports.¹⁰⁴ Ultimately, commercial policy was neither 'within *the* Prospect of *the* merchant', nor 'their Power Care or Consideration; And least of all in their Aime, when some of them are easily discerned to be expressely contrary to their privatt profitt or gayne'.

This was the rationale for erecting a mainly non-mercantile council of trade, which was free from 'the Intrigues & privat designes of merchants'.¹⁰⁵ The Councils formed in 1660, had suffered from too diverse a membership, and Worsley recommended that 'The maior part may Consist of such of the Gentry of the nation whose Interest it may be to be more concerned; in the generality of the Trade of the nation and in the good of the management of if Then in the profitt of this or That perticular Trade which may possibly sway with the privat merchants'.¹⁰⁶ This, combined with the paternalist vision which Worsley presented of government as the 'naturall Parent' of the nation, protecting 'the good & wellfare of every perticular person', suggests a traditional attitude to the government of trade.¹⁰⁷ However, this was more than just the 'great chain of being' translated into commercial policy: rather than suggesting a natural hierarchy of obedience and duty, Worsley evoked a harmony of

¹⁰⁴ Ibid., fol. 87r.

¹⁰⁵ Ibid., fol. 87v.

¹⁰⁶ Ibid., fol. 88r.

¹⁰⁷ Ibid., fol. 87r-v.

private economic interests, in which the state 'doth obleige *th*e Interest of all persons universally, to a hearty union & Concurrence with it, & to a yeelding of all possible duty & subjection to it'. Similarly, it was not the gentry's natural quality of leadership which justified their role in governing trade: rather, they were the social group whose commercial interests were closest to the nation's as a whole, as opposed to the merchant who was likely to favour specific trades. Even so, Worsley stressed the need to limit the powers of a council, which should initially be probationary, to avoid its membership acquiring a fixed interest and becoming a private cartel. Further measures to avoid corruption included regulating the conduct of debates, so that 'they are alwaies directed to *the* generall good & Concerne of *the* nation in opposition to *the* sinister privatt or particular aime or end of any person', the Privy Council having the final say in disputes.¹⁰⁸ This careful formula would ensure that the public good was not lost amongst petty disputes or particular interests.

It also created the space for the impartial, expert advisor, who could understand the world of commerce more fully than the landed aristocrat, but who was not of merchant status himself- whose interest was identified with that of the state, and whose office could therefore be more permanent. The ideal post to fill this void, of course, was the conciliar secretary, and here we can perhaps see Worsley already edging back to his previous role.

These proposals, 'remarkable not so much for the originality of the ideas put forward, as for the unusual clarity and coherence with which they were developed',

¹⁰⁸ Ibid., fol. 87v.

evidently won Worsley some admirers, for on 20 October 1668 he was appointed to the new Council of Trade with a salary of £200.¹⁰⁹ However, the composition of this body was far from the advice Worsley had given: although there were certainly several important gentry members, including Buckingham, Ashley and Arlington, there was a hefty mercantile contingent of perhaps 19 out of 42 members.¹¹⁰ Worsley would have been happier with the detailed instructions issued to the Council, which included free ports amongst a wide range of subjects to be considered.¹¹¹ Worsley sent a copy to John Winthrop in Connecticut, requesting 'That if any thing do occurre to your Observation ... I may better enjoy the Benefitt of it or rather not I But the nation it selfe'.¹¹² To Worsley, England and New England were part of the same nation, therefore, an attitude entirely consistent with his position on a centralised colonial body. By contrast, Winthrop responded to the Council's instructions as a colonial governor, keen to distinguish the interests of his colony from those of the metropolis. Thus he was glad that 'many very weighty matters are conteined therein pointing at the publique good, & benefitt not only of the English people at home, but those also of the plantations abroad', but added as a caution that 'I hope God will guide your consultations for a generall advantage to the English aswell in their swarmes, as in the hives'.¹¹³

¹⁰⁹ Kelly, "Introduction" to Locke on Money, p. 7; J.C. Sainty, Office Holders in Modern Britain. Vol. III. Officials of the Board of Trade 1660-1870 (London: Athlone Press, 1974) p. 19. The salary is ascertained by a warrant issued to Worsley for £200 on 15 December 1669, i.e. just over a year after the Council of Trade was formed. CSPD, 1668-1669, p. 617. This order was confirmed by the Treasury on 23 February 1670. CTB, 1669-1672, p. 373.

¹¹⁰ Andrews, "British Committees", p. 93; Thornton, *West India Policy under the Restoration*, p. 135. For more on this body, see chapter 8, below.

¹¹¹ The instructions are printed in T & C, pp. 524-8.

¹¹² Letter, Worsley to John Winthrop junior, c. June 1670. Massachusetts Institute of Historical Research, Winthrop Papers, Microfilm Reel 9.

¹¹³ Letter, Winthrop to Worsley, 27 October 1670. Massachusetts Institute of Historical Research, Winthrop Papers, Microfilm Reel 9.

It appears that such an unwieldy Council was ill suited to achieve this, suffering from the same problems of its 1660 predecessor, and it fell into inactivity after 1670.¹¹⁴ Despite this, Worsley was apparently a prominent member, and was amongst the signers of the Council's most important report, which led to customs officials being sent to the colonies to administer the oath which required governors to promise to uphold the navigation acts- a notable act of metropolitan assertiveness.¹¹⁵ Historians have seen the Council of Trade as a less important body than the committee summoned by the House of Lords in October 1669, whose initial remit was to consider the decay of rents, but which also considered the problems of commercial depression more widely.¹¹⁶ Worsley was one of 5 members of the Council of Trade called to give evidence on 4 November. and was asked to speak first, attesting to the degree of respect he was now afforded as a commercial expert.¹¹⁷ He stressed that the fall in rents was a consequence of an adverse balance of trade, blaming 'The negligence of manufacture whereby the nation have lost their repute abroad'.¹¹⁸ It was therefore necessary to encourage domestic manufacturing, especially cloth, although as we have seen Worsley doubted whether English drapery could recover. The figure who dominated proceedings, however, was Josiah Child, who presented an exhaustive dissection of the nation's commercial situation, bluntly concluding 'All trade a kind of warfare'. Another speaker then brought up the subject of the rate of interest, suggesting that a low rate was 'the unum magnum to help the

 ¹¹⁴ Roger North would later allege that the Council was ruined by conflict between East India and Levant merchants, who comprised many of its leading members. Letwin, *The Origins of Scientific Economics*, pp. 24-5.
 ¹¹⁵ Report dated 4 December 1668. *CSPC*, 1661-1668, pp. 629-630; Andrews "Delivity Constraints".

¹¹⁵ Report dated 4 December 1668. CSPC, 1661-1668, pp. 629-630; Andrews, "British Committees", pp. 94-5; Thornton, West India Policy under the Restoration, p. 139. In a petition requesting that he be paid his salary for his first year employment, which was by then overdue, Worsley claimed that he had 'never been absent nor declined any command in the service'. CSPD Oct. 1668- Dec. 1669, p. 651.

¹¹⁶ Letwin, *The Origins of Scientific Economics*, pp. 5-9. On perceptions of economic depression at the time, Spurr, *England in the 1670s*, pp. 119-126.

¹¹⁷ The minutes of the committee are printed in T & C, pp. 68-79. ¹¹⁸ Ibid., p. 69.

business', and this set Child off on his pet project, the legal reduction of interest to 4%.¹¹⁹ Later sessions focussed on this issue, when Child was opposed by Silas Titus who argued that a forced cut would cause money to be 'called in', leading to a shortage of money for lending. Worsley agreed that 'Interest of money [is] so necessary an appendix to all civil affairs', but he leaned to Titus' position, arguing that 'He that persuades the lowness of interest must show that there is sufficient for trade, for the rebuilding of London, for the nobility and gentry's use, and for his Majesty's occasion ... Where seed is made choice of and the land not manured and fitted for the seed, the crop must fail'.¹²⁰ Worsley thus subscribed to the opinion that lower interest rates would be a consequence, rather than a cause, of expanded trade. The committee actually went with Child, but a bill to cut interest to 4% was later rejected, partly thanks to the opposition of Ashley; at the same time, Locke wrote his own paper which followed Worsley by favouring colonial trade as the means to bring in money naturally.¹²¹

By then, Worsley was firmly committed to the plantation trade, and he would doubtless have preferred to serve on a council more focussed on it. However, occasionally colonial business did come before the Council, one example being a particularly difficult case involving colonial property rights in the aftermath of the Second Anglo-Dutch War. John Locke would later famously equate the property-less state of nature with the North American Indians, and his *Two Treatises* implicitly

¹¹⁹ Ibid., p. 71; Letwin, *The Origins of Scientific Economics*, pp. 7-8. Child's ideas were presented in his *Brief Observations Concerning Trade, and Interest of Money* (London, 1668). For the converse argument, that to legally cut interest rates 'is to force nature', see an anonymous pamphlet, *Interest of Money Mistaken, Or a Treatise, Proving, that the Abatement of Interest is the Effect and not the Cause of the Riches of a Nation* (London, 1668)- quote on p. 9. See also T. Keirn & F. Melton, "Thomas Manley and the Rate-of-Interest Debate, 1668-1673", *Journal of British Studies*, 29 (April 1990) pp. 147-173.

¹²¹ Kelly, "Introduction" to Locke on Money, pp. 9-10, 52-4.

justified the expropriation of their lands.¹²² Equally, however, since its settlement by Europeans the New World had been plagued by disputes over property, conquest and sovereignty amongst the colonial powers (as Locke would have know all too well from his work on the Plantations Council of 1672-4), resembling a series of test cases concerning principles of property and government, negotiated diplomatically between rival empires.¹²³ This particular one concerned the former English colony on the River Surinam, which had been founded in 1651 by Francis Lord Willoughby, and had initially thrived, reaching a population of 4,000 by 1663.¹²⁴ However, its proximity to Dutch and French settlements on the Guianan coast meant that Surinam was particularly vulnerable during the second Anglo-Dutch War, allowing a fleet from Zeeland to capture the colony on 6 March 1667.¹²⁵ The reasons given for this capitulation by the Governor, William Byam, vividly attest to the precarious existence of colonial settlements caught up in inter-European disputes:

To Conclude an universall and Continued sickness an imperfect halfe built Fort, the vast distance of our settlements an unable and devided people the Age, sickness, weakness, and Backwardness of many the Infedellity of more, the want of Ammunition, the Insolent disorders of our owne Negroes, The dayly expectation of the merciless French and the utter dispaire of any releife, were the Confluence of united Judgments, which our sinns had ripened, all concurring to Subject us under the yoake of our Enemies.¹²⁶

The colony had subsequently been recaptured and placed under a new governor, Major-General James Bannister, in October, but by then the Peace of Breda that ended

¹²² A. Pagden, "The Struggle for Legitimacy and the Image of Empire in the Atlantic to c.1700", in N. Canny (ed.) The Oxford History of the British Empire, Vol. 1. The Origins of Empire, pp. 42-47.

¹²³ For the importance of such inter-state negotiations to empire and state-building, E. Manke, "Empire and State", in The British Atlantic World, 1500-1800, ed. Armitage & Braddick, pp. 175-195.

¹²⁴ C. Goslinga, The Dutch in the Caribbean and on the Wild Coast 1580-1680 (Assen: Van Gorcum & Company, 1971) pp. 421-5.

¹²⁵ Ibid., pp. 396-400; J.A. Williamson, English Colonies in Guiana and on the Amazon, 1604-1668 (Oxford: Clarendon Press, 1923) pp. 177-184. ¹²⁶ Lieutenant-General William Byam's Journal of Surinam, 1665-7. BL Sloane MS 3662, fol. 37r.

the war had ceded Surinam to the Dutch, in exchange for New Amsterdam.¹²⁷ Bannister reluctantly surrendered the colony in April 1668, having done much to render it worthless, whilst the remaining English settlers were assured of their right to depart by the articles of surrender. However, upset by Bannister's behaviour, the new government of Surinam refused the remaining English settlers access to their property or freedom to leave, before arresting Bannister and transporting him to Zeeland in August.¹²⁸ Bannister's complaints reached the crown in October, and must have been directed to the Council of Trade then, for on 12 November its members advised that the articles of surrender had clearly been violated and the crown should intervene.¹²⁹ Bannister was eventually ejected from Zeeland in December, and so it was probably shortly after then that Worsley met with him on behalf of the Council of Trade, as its leading expert on colonial affairs.

Worsley produced a thorough account of the meeting, focussing on Bannister's understanding of the crucial 5th clause of the articles of surrender, which granted inhabitants the right to depart and sell their estates.¹³⁰ The colonists' case rested on the terms of their surrender, which confirmed their natural property rights:

For as the Word power in the 5th Article, which is given to every of the said Inhabitants to sell that should at any time depart, can be understood no other power than that which naturally and doth of right result to every man from the plenary property which he himselfe hath in any thing (exclusive to all others) so this power to sell is not given but taken away, when he that is to sell may not have liberty to sell to whome he will...¹³¹

¹²⁷ Goslinga, The Dutch in the Caribbean and on the Wild Coast 1580-1680, p. 407.

¹²⁸ They may also have been aggrieved by the arrival of an English ship commissioned to attack the Arawack Indians on the Guianan coast (which the Dutch now claimed in its entirety). CSPC 1660-1668, pp. 598-600.

Ibid., pp. 621, 623.

¹³⁰ Worsley's report on Surinam, probably presented to the Council of Trade, c. January 1668. Bodleian Library, MS Rawlinson A478, fols. 32-37 (copy belonging to Lord Arlington). ¹³¹ Ibid., fol. 35r.

The colonists requested that the Council act as 'Mediators to his Majestie', and accordingly it supported Bannister's petition to the King, dated 5 May 1669.¹³² This, and other complaints, produced a reply from the Grand Pensionary Johann de Witt, dated 2 July 1669, which came into the consideration of Lord Arlington. Arlington had already received copies of some of Worsley's papers, whilst Worsley had previously advised his secretary, Joseph Williamson, on the question of whether to allow the naturalisation of a number of ships for the Eastland trade (which he objected to as it would retard the long-term growth of the domestic shipbuilding industry).¹³³ Thus Arlington commissioned Worsley to produce an answer to de Witt, apparently on a personal basis.

De Witt argued that Surinam was possessed by the Dutch 'with all the rights and a Power unlimited of Superiority and Soveraignity', and therefore its inhabitants had no right to appeal to Charles II, or he to intervene in their affairs: if this rule was ignored, 'the whole world would bee disturbed, and turned upside Downe'.¹³⁴ Worsley's answer was full of praise for de Witt's 'Maturenesse' and 'strength of Argument', which was 'De Jure Grotium'.¹³⁵ He summarised de Wit's main argument as being that, in the aftermath of Breda, '*th*e dispenceing of *tha*t Justice due to *th*e said inhabitants ... doth not onely singly but excluseively belong to *th*e Right of *the* said state who is present possessor of *the* said place as an inseperable branch or part of *that* soveraingty'.¹³⁶ The

¹³³ See Williamson's notes, dated 2 April 1669. CSPD, Oct. 1668-Dec. 1669, pp. 260-1, 290-2. V.
Barbour, "Dutch and English Merchant Shipping in the Seventeenth Century", Economic History Review, Vol. 2, No. 2 (Jan. 1930) p. 273. On Williamson, see A. Marshall, "Sir Joseph Williamson and the Conduct of Administration in Restoration England", Historical Research, 69, 168 (1996) pp. 18-41.
¹³⁴ De Wit's Discourse concerning Surinam, 2 July 1669. Copied into a Colonial Entry Book concerning Surinam, PRO CO 278/2, pp. 7-13 (quotes on pp. 7, 9).
¹³⁵ 'Animadversions on my Lord de Wits Paper presented to my Lord Arlington', after 2 July 1669. In

¹³² Ibid., fol. 37r. CSPC, 1669-1674, pp. 21-2.

¹³⁵ 'Animadversions on my Lord de Wits Paper presented to my Lord Arlington', after 2 July 1669. In The 1661 Notebook of John Locke', Bodleian Library Microfilm 77, p. 253. A copy is also entered in PRO CO 278/2, pp. 13-19.

¹³⁶ Ibid., p. 254.

settlers had 'undeniable rights' embodied in the terms of their surrender, and could legitimately protest if these were not being fulfilled, but only to the States-General. To turn to some outside authority, even the King of England, would introduce two competing sovereigns within the colony, and thus 'there could never be any peace or any end put to the settlement of the soveraignty or Dominion of them'.¹³⁷

Worsley accepted that sovereignty was indivisible, remarking that the alternative would 'equally be as inconvenient for his Majestie in Reference to the Country of the Manhatons, as it is for the Dutch in Surinam'.¹³⁸ He therefore turned to means by which the crown could get round these problems and intervene on behalf of the English remaining at Surinam, which was in its interest to do not only as a point of honour, but because they were vital to the economic success of the colony. Worsley conceded that the treaty had clearly stated that 'either party shall keep & possesse for the future all such Lands, Places, & Colonies ... with plenary Right of Soveraignty, property and possession'.¹³⁹ However, it had equally enshrined the articles of surrender, which clearly provided for the settlers' right to depart.¹⁴⁰ Worsley therefore argued that 'if the limitation be not to be applyed to the soveraignty it must of necessity be applyed to the possession & detention because beside these two things there is nothing else before mentioned'.¹⁴¹ The implicit conclusion was that the remaining English settlers could therefore protest to Charles II on the issues of their property and detention without compromising Dutch sovereignty, which did not extend to these matters. Meanwhile Worsley demonstrated that England retained a right to settle those parts of the Guianan

¹³⁷ Ibid., p. 256. ¹³⁸ Ibid., p. 260.

¹³⁹ Ibid., p. 259.
¹⁴⁰ Ibid., p. 258.
¹⁴¹ Ibid., p. 260.

coast which the Dutch did not possess when the articles of surrender were signed, which he saw as a more important point. Worsley's neat logic may not necessarily have influenced the crown's policy, but it had certainly allowed him to demonstrate to Arlington his skill in interpreting inter-colonial jurisdictional disputes in a way which favoured English interests, further advancing his reputation.

Worsley's respect for the Grand Pensionary's opinions seems to mark a shift in his attitude to the Dutch, precipitated not by any decline in their commercial power, but by the growing assertiveness of France under Louis XIV and Colbert. Worsley had already complained to Ashley that 'while they pretent to peace they doe actually make warr with us', through tariffs on English imports, and argued that it was 'farr better, to have noe trade at all & to be at open Warr with a nation; Then to have such an unequal peace or Comerce'.¹⁴² Here we can see that shift from anti-Dutch to anti-French sentiment amongst many Englishmen, which has been discussed by Pincus.¹⁴³ Although it took dramatic French success in the Third Anglo-Dutch War to conclusively persuade public opinion that it was they who now threatened to become a 'universal monarchy', even before then many had been issuing similar warnings, in particular political radicals such as Slingsby Bethel.¹⁴⁴ Worsley held similar fears, but rather than focussing (like Bethel) on France's European ambitions, these were preoccupied with an area Bethel

¹⁴² Memorandum on 'The peculiar advantages *which* this Nation hath by the trade of our planta*tions*', addressed to Lord Ashley, 14 August 1668. PRO 30/24/39, fol. 225v-226r.

¹⁴³ S. Pincus, "From Butterboxes to Wooden Shoes: The Shift in English Popular Sentiment from Anti-Dutch to Anti-French in the 1670s", *Historical Journal*, 38, 2 (1995) pp. 333-361.

¹⁴⁴ Ibid., pp. 340-1; [S. Bethel], The Present Interest of England Stated (London, 1671).

had little interest in- the West Indies.¹⁴⁵ Whilst Worsley does not appear to have seen France as so serious a commercial rival in the West Indies as the Dutch, he feared a movement of aggressive and violent expansion by which France would become the dominant European power in the Caribbean.

In fact, Louis' main target was the decaying Spanish empire, but Worsley recognised that this threatened England by upsetting the regional balance of power, and so he advised a policy of upholding the Spanish empire as a bulwark, outlined in two papers for Buckingham. These centred on the controversial issue of the Jamaican privateers, who, despite the complaints of Spain, were tacitly supported by the governor Sir Thomas Modyford, throughout the 1660's.¹⁴⁶ During the period there was continual debate about whether to suppress these marauders in return for commercial concessions with the Spanish colonies, or to continue to use them in defence of that vulnerable colony. Worsley's difficulty was that, although he was in favour of a strategic alliance with Spain against France, he recognised the difficulty of suppressing the privateers, as well as the importance of the trade to Jamaica's economy.¹⁴⁷ Although Worsley believed Jamaica's future lay in sugar, he was aware that in the meantime necessity dictated supporting actions which could only be countenanced in the moral vacuum that existed 'beyond the line'.

Worsley's first letter on the subject, written in 18 December 1668, responded to Spanish complaints about Henry Morgan's raid on Porto Bello in the previous June, which had provoked particular indignation given that England and Spain had signed a

 ¹⁴⁵ French assertiveness involved sending a well-armed royal governor to preside over the French colonies in 1664, and chartering a royally financed West India Company. Thornton, *West India Policy Under the Restoration*, p. 127
 ¹⁴⁶ Ibid, pp. 67-123.

¹⁴⁷ N. Zahedieh, " 'A Frugal, Prudential and Hopeful Trade'. Privateering in Jamaica, 1655-89", Journal of Imperial and Commonwealth History, 18, 2 (1990) p. 154.

commercial treaty in May 1667.¹⁴⁸ Worsley acknowledged that the King's first instinct would be to suppress the perpetrators of this unauthorised attack, given his 'Inclination to Love to live quietly among his neighbours ... As preferring not only Justice and peace But good order and Governement before his profitt'.¹⁴⁹ However, this decision had wider strategic implications. Thus, 'considering that once a Theife and ever a Theife', it was unrealistic to hope that the privateers would lay down their arms. If they were forced to do so, the privateers were likely to simply switch their attention to English shipping and settlements. More worryingly, the 2,000 or so privateers would be sure to look for protection by some less scrupulous colonial governor, and given that the Dutch were 'a sober & Tradeing people', there was only one likely candidate: the French. This had already happened with regard to the 'Buckaneeres or Cow-Killers' of Hispaniola, a particularly ruthless band of about 5,000 bandits who, having been turned down by the English, had gone into service under the French 4 years previously. Thus, although Charles II was likely to 'make great scruple' about tolerating privateers, 'Yett it followeth not therefore that the French will be of the same temper'.¹⁵⁰

By focussing on the West Indies, Worsley argued, Louis XIV could 'with farr less Charge & trouble to himselfe ... make himselfe the universall monarch of Christendome, then by any Attempts he can propound to himselfe upon Germany Millaume Flanders & Franche Comte'.¹⁵¹ The privateers became a pawn in this power game played across the Atlantic, and not only because of their military power: equally important was the fact that 'a very Considerable number of persons alsoe doe live in

¹⁴⁹ 'Considerations about the Jamaica privateers', addressed to the Duke of Buckingham and sent to other Privy Councillors including Lord Arlington and Sir Orlando Bridgeman, 18 December 1668. Bodleian Library, MS Rawlinson A478, fol. 61r (copy belonging to Arlington). Second copy in 'The 1661 Notebook of John Locke', Bodleian Library Microfilm 77, pp. 172-179.

¹⁴⁸ Thornton, West India Policy under the Restoration, p. 97.

¹⁵⁰ Ibid., fol. 62r.

¹⁵¹ Ibid., fol. 61v.

Jamaica by the advantage of them', and this economy was likely to collapse if they were to depart. In fact, the Treaty of Madrid of 1670 and the recall of Modyford saw the crown take a stricter attitude to privateers, but they continued to play an important role in Port Royal's until its destruction in 1692.¹⁵² Meanwhile Worsley wrote a lengthy sequel to his first letter, which had been circulated to Arlington and the Lord Keeper Sir Orlando Bridgeman as well as other Privy Councillors, in February 1669. Again, Buckingham was the recipient, but Arlington and Ashley also received copies.¹⁵³ This time, Worsley was much more explicit about the French strategy in the region, which, he argued, focussed on Hispaniola. Jamaica was ideally suited to stand in the way of the French designs on this island, as the strategic key to the Bay of Mexico.¹⁵⁴ France was likely to use the decaying Spanish empire as a stepping-stone before eventually challenging England, and so Worsley advocated a strategic alliance with the Spanish empire- England's traditional enemy in the Americas since Elizabeth's reign. This, in turn, might be the most effectual way to eventually suppress the privateers and settle Jamaica's long-term commercial future, and Worsley suggested that England and Spain enter into 'a League offensive and defensive for the respective Dominions of each nation in the West Indies as wee have already done, for the respective Dominions of each in Christendome'.¹⁵⁵

This, however, was no easy matter. As well as its grievance about privateering, Spain's long-standing refusal to recognise any English presence or trade in the West Indies stood in the way of collaboration. Worsley proposed playing the one off against

¹⁵² Zahedieh, "'A Frugal, Prudential and Hopeful Trade'", pp. 156-7.

 ¹⁵³ Second 'large' letter on Jamaica, addressed to Duke of Buckingam and sent to Ashley and Arlington,
 24 February 1669. PRO 30/24/49, fols. 37-48 (Ashley's copy). Further copies in 'The 1661 Notebook of John Locke', Bodleian Library Microfilm 77, pp.180-214; British Library Add. MS 11410, pp. 623-674.
 ¹⁵⁴ Ibid., fol. 36v.

the other. The suppression of piracy, he suggested, should be a joint Anglo-Spanish enterprise, largely financed by the latter. This would also force the Spanish to finally recognise England's possession of the island seized from it in 1655.¹⁵⁶ Similarly, it would be fair compensation to allow Jamaica to monopolise trade into Spanish America, 'as may in some measure answer both to the kindness, trouble, and charge that his Majesty is likely to be put to'.¹⁵⁷ Jamaica had already benefited from illegally trading with Spanish colonies, often by force, for contraband goods.¹⁵⁸ Worsley suggested deliberately cultivating Port Royal's role as 'the greatest seat of trade of any in the West Indies', as an 'express act and designe of State'.¹⁵⁹ This would be but one aspect of a programme aimed at developing Jamaica's economy so that it could subsist without relying on the dubious benefits of plunder. The Navigation system had placed colonial trade in an imperial straitjacket, requiring planters to rely on a limited number of traders and thus forcing down prices; however, Worsley did not merely see the plantations as a cash-cow for the metropolis, and his vision of colonial political economy would compensate for this by granting certain other privileges.

These were basically the same as those which he had suggested for sugar in his earlier paper to Buckingham: free trade in slaves alongside various customs' immunities, and royal encouragement for 'planting of any new Commodity in the said Island belonging to Turkey', presumably including senna.¹⁶⁰ More specifically, Jamaican chocolate should be exempt from paying any excise, whilst Jamaica should be

¹⁵⁶ Ibid., fol. 40v.

¹⁵⁷ Ibid., fol. 41r.

¹⁵⁸ See N. Zahedieh, "The Merchants of Port Royal, Jamaica, and the Spanish Contraband Trade, 1655-1692", *William and Mary Quarterly*, 3rd series, Vol. XLIII, No. 4 (Oct. 1986) pp. 570-593; "Trade, Plunder, and Economic Development in Early English Jamaica, 1655-89", *Economic History Review*, 2nd series, XXXIX, 2 (1986) pp. 205-222.

¹⁵⁹ Second 'large' letter on Jamaica, addressed to Duke of Buckingam and sent to Ashley and Arlington, 24 February 1669. PRO 30/24/49, fols. 41r-v.

¹⁶⁰ Ibid., fol. 47r.

given a monopoly within the English colonies for the production of both cacao nuts and pepper. The latter was ideal for flavouring chocolate, broths, stewed meats, or distilled drinks, due to 'the spirit of it being very tender, and the fragrancy lying in parts that are subtle and thin', and when mixed with other spices, it might eventually prove more suitable to English tastes than East Indian pepper: 'And if the power of the East India Company should by this or any other meanes come to be considerably abated, the strength growth and flourishing of the Netherlands would as soone be Lowred'.¹⁶¹ The popularity of chocolate throughout Europe meant it was 'ready & current money in all places', whilst in England the 'Common people' had already 'got the Taste of it and doe seeme much to Covett it'.¹⁶² This was attributable to 'the wantoness and Luxxe of our nation', addicted not only to chocolate, but also to currants, spices, wine, tobacco and 'Strong waters'. The irresistible appetite of Englishmen for luxuries could not be suppressed with sumptuary laws, and so it was necessary to ensure a plentiful supply of these commodities from a domestic source, or else be at the mercy of some foreign supplier.

These improvements would be secured by improving Jamaica's defences, which would presumably have been one of the responsibilities of a royal governor for the whole of the English West Indies, whom Worsley suggested should be sent over in imitation of the French, allowing the crown to 'publiquely resolutely and declaredly ... appeare to assert his Interest and *the* Concerne of his Trade there'.¹⁶³ This last measure was not in fact adopted, but the interest with which statesmen received Worsley's

¹⁶¹ Ibid., fol. 44v.

¹⁶² Ibid., fols. 44v-45r.

¹⁶³ Ibid., fol. 40r.

papers is suggested by their wide circulation.¹⁶⁴ Meanwhile, the Treaty of Madrid introduced an Anglo-Spanish rapprochement along the lines which he had suggested. However, the best indicator of the respect Worsley was earning is the path that his career would take after 1670, in the employment of Charles II.

On 30 July 1670 a Council for Foreign Plantations was formed under the presidency of the Earl of Sandwich.¹⁶⁵ The fact that this body was confined to 10 members (although 8 were added in 1671), with nobles and members of the gentry preferred to merchants, attests to the relative failure of the 1668 Council of Trade, and was much closer to the advice Worsley had given to Ashley. Fittingly, therefore, Worsley was employed as assistant to the Council's secretary, Henry Slingsby, with a salary of £300.¹⁶⁶ The Council's Instructions, too, seem to owe something to the advice Worsley had been giving for the previous two years, paying great attention to the rationalisation of imperial rule, and the regulation of colonial production and trade.¹⁶⁷ In particular, they stressed the importance of a more effective oversight of colonial governors, who had previously been able to act with too much autonomy. Perhaps the main indicator of imperial ambition was the Council's role in drafting instructions to the governors: to Sir Charles Wheeler, the first single governor of the Leewards (following the advice of the Council to separate their government from Barbados), and his

 ¹⁶⁴ He was still in touch with Buckingham in December 1669. A. Browning (ed.) Thomas Osborne, Earl of Danby and Duke of Leeds, 1632-1712. Vol. II: Letters (Glasgow: Jackson & Son, 1951) p. 24.
 ¹⁶⁵ J.C. Sainty, Office Holders in Modern Britain. Vol. III. Officials of the Board of Trade 1660-1870 (London: Athlone Press, 1974) pp. 20-21.

¹⁶⁶ The president's salary was £700, with the other members being paid £500 each, excluding those aristocrats added in 1671. Buckingham was numbered amongst the latter, and although Arlington and Ashley were not official members, they frequently attended as members of the Privy Council; another member familiar to Worsley was John Evelyn, who joined as a salaried member in 1671. Ibid. ¹⁶⁷ Printed in Andrews, "British Committees", pp. 117-126.

successor Sir William Stapleton, and to William Lord Willoughby for Barbados and Sir Thomas Lynch for Jamaica. In all of these cases, care was taken to reign in their powers, whilst the Council also began to scrutinise colonial laws- again, entirely consistent with Worsley's advice.¹⁶⁸

As well as dealing with the governors, the Council's meetings (generally taking place more than once a week) dealt with a wide range of matters, and were rather inundated with petitions and complaints which, as was the case with all similar bodies in this period, tended to be very time consuming.¹⁶⁹ It is difficult to discern Worslev's voice in distinction from that of the Council as a whole. One rare glimpse of his personal input was noted in the diary of another member, John Evelyn, which recorded that in February 1671 the Council 'entred upon enquiries about improving his Majesties American Dominions by Silk, Galls, Flax, Senna &c & considered how Nutmegs & Cinamon might be obtained, & brought to Jamaica, that Soile & Climat promising successe; upon this Dr. Worsley being called in spake many considerable things about it'.¹⁷⁰ No doubt the Council would have made use of Worsley's experience when it drew up a commission for James Bannister to finally fetch the remaining English from Surinam, on 5 November 1670, as well as when considering matters such as colonial sugar.¹⁷¹ This commodity was included in the Subsidy Bill of November 1670, which became a subject of dispute between the Commons and Lords throughout 1671 over the

¹⁶⁸ Thornton, West India Policy under the Restoration, pp. 141, 145-6; Andrews, "British Committees",

pp. 103-4. ¹⁶⁹ For the Council's work in general, Andrews, "British Committees", pp. 104-5; Bieber, "The British

¹⁷⁰ The Diary of John Evelyn, ed. E.S. Beer (London: Oxford University Press, 1959) p. 567.

¹⁷¹ Andrews, "British Committees", pp. 133-4. Bannister's instructions are in the Colonial Entry Book concerning Surinam, PRO CO 278/2, pp. 26-32. This mission did not settle the matter, however: the Council of Foreign Plantations had to respond to Bannister's further complaints about being obstructed by the Dutch in August 1671, as did its successor in 1674 by which time Locke was secretary in Worsley's place. Ibid., pp. 33-74.

appropriate level at which to tax white sugar exported from the colonies. Worsley wrote a paper on the subject for Sandwich, arguing in favour of granting privileges to promote colonial sugar refining, against the interests of English refiners.¹⁷²

Sandwich himself died in 1672, leading to a reorganisation whereby the Council absorbed the defunct Council of Trade, under Ashley's (now Earl of Shaftesbury and Lord Chancellor) presidency. Worsley was promoted to the position of secretary, with a salary of £500.¹⁷³ Locke was employed as his assistant, and the Council represented the summit of Shaftesbury's colonial designs, although other statesmen such as Arlington remained involved.¹⁷⁴ An initial draft of the lengthy instructions is in Shaftesbury's papers, probably drafted by Shaftesbury and Locke, but perhaps with recourse to Worsley's suggestions, and representing the product of at least 22 years experimentation in the government of trade and the colonies.¹⁷⁵ Accompanying this was a bold measure: the Declaration of Indulgence of 15 March 1672, which allowed dissenters like Worsley to breathe freely for a while.¹⁷⁶ These measures seemed to be taking the English state in a direction Worsley would have approved of, applying some elements of the English and Dutch Republics to the monarchy. However, they came at a cost - in order to pursue the policy of indulgence, Charles II needed to free himself from reliance on parliament, and the means he found to do so contradicted the advice which Worsley had been giving for the last 4 years: an alliance with France, bringing the crown financial respite. Similar concerns were behind the Stop on the Exchequer of 2 January 1672, much to the dismay

¹⁷² A copy of this paper, entitled 'The True State of the Manufacture of Sugar within our Plantations, which requires all Manner of Incouragement', is in volume 10 of Sandwich's journals; as these remain in private possession, I have not been able to access it. F.R. Harris, Edward Montagu 1st Earl of Sandwich (1625-1672), Vol. II (London: John Murray, 1912) pp. 225-6.

¹⁷³ Sainty, Office Holders in Modern Britain. Vol. III. Officials of the Board of Trade 1660-1870, p. 23. ¹⁷⁴ Andrews, "British Committees", pp. 106-7.
 ¹⁷⁵ PRO 30/24/41, fols. 120-123. They are printed in Ibid., pp. 127-132.

¹⁷⁶ Spurr, England in the 1670s, p. 29. For more on the connections between liberty of conscience and the improvement of trade, see chapter 8, below.

of the London business community, and hardly looking like the actions of a state keen to promote trade.¹⁷⁷ Meanwhile the Treaty of Dover led to a Third Anglo-Dutch War, beginning on 13 March 1672, with the French this time as allies- Sandwich himself was an early casualty.

Thus the new Council of Trade and Plantations had from its beginnings to contend with the effects of another Dutch war, to add to the disastrous legacy in the West Indies of the last one. Fortunately, this time the Caribbean was not so intensive a theatre of conflict, although the first item of business the Council had to deal with was a rumour, conveyed by Arlington, that the Dutch were preparing to attack Jamaica.¹⁷⁸ It could therefore basically continue the work of the previous Plantations Council, although now trade in general fell under its jurisdiction.¹⁷⁹ As secretary, Worsley was responsible for administering the Council's business, recorded in his meticulously neat handwriting in an entering book.¹⁸⁰ One of his main tasks was to correspond with the colonial governors on the Council's behalf, beginning with a letter informing Sir Thomas Lynch about the Dutch design on his island, whilst a second letter congratulated Lynch for his 'care for the wellfare of the said island, especially that you have endeavoured to remove that humour of Debauchery, that was got much into Creditt in the tyme of your Predecessor'.¹⁸¹ It is difficult to distinguish Worsley's personal opinions and those of the Council in these letters, but Worsley seems to have been unconcerned about including his own observations. In fitting with his previous suggestions for Jamaica, Worsley questioned Lynch about its vegetation, especially

¹⁷⁷ Ibid., p. 27.

¹⁷⁸ Plantations Journal, 1672-4, pp. 2-3.

¹⁷⁹ Andrews, "British Committees", pp. 110-111.

¹⁸⁰ PRO CO 389/5.

¹⁸¹ Letter, Worsley to Lynch, 2 November 1672. PRO CO 1/29, fol. 102 (calendared in *CSPC*, 1669-1674, p. 424). See also *Plantations Journal*, 1672-4, pp. 3, 5, 7-8; letter, Worsley to Lynch, 30 November 1672. PRO CO 1/29, fol. 140r (calendared in *CSPC*, 1669-1674, p. 439).

'Vanillas, China roots, Contrayerva, and Achiott', which interested him 'as a Phisitian' with some 'Friendship and Intimacy with Mr Robert Boyle'. Another letter noted approvingly that the colony 'had near three times the trade this year that they had the last', noting with relief that they had had 'no manner of disturbance from *the* Dutch'.¹⁸² Worsley was not alone in thinking the Dutch threat to Jamaica exaggerated: Lynch himself purported to be little 'troubled with the feare or Noyse of an invasion'.¹⁸³ However, he welcomed the Council's letters nonetheless- 'Such favours as these come like Blessings from Heaven, that are long look'd and long pray'd for, soe it is an extraordinary Comfort to the Inhabitants to thinke soe many Great men, and good Patriots are concerned for them'.¹⁸⁴

The Council could generally be relied on to speak on Jamaica's behalf, but only insofar as this was consistent with the imperial oversight that it was attempting to inaugurate. In Jamaica's case, this meant subjecting the colony's laws to intensive scrutiny, although only about 7 of 34 acts signed by Lynch in May 1672 were successfully approved.¹⁸⁵ Perhaps this slowness encouraged the Council to pass an order formalising the assessment of colonial legislation in future, on 10 April 1673.¹⁸⁶ Aside from Lynch, the only colonial governor with whom Worsley corresponded was William

¹⁸² Letter, Worsley to Lynch, 1 January. PRO CO 1/30, fol. 1r (calendared in *CSPC*, 1669-1674, p. 459).
¹⁸³ Letter, Lynch to Worsley, 6 April 1673. PRO CO 1/30, fol. 46r (calendared in *CSPC*, 1669-1674, p. 479).

¹⁸⁴ Lynch proceeded to issue a litany of complaints about the poor state of Jamaica's defences, and the difficulty in raising a revenue from what he would later describe as 'the shadow of a Parliament': 'such Assemblies' were 'haunted with malignant spirits, which are not to be conjured down by reason'. Letter, Lynch to Worsley, 15 May 1673. *CSPC*, *1669-1674*, p. 490. Lynch soon afterwards dissolved the Jamaican assembly, complaining that 'Assemblies are apt to be refractory when not restrained by an absolute power'- which, unfortunately, he did not possess. Letter, Lynch to Worsley, 8 July 1673. Ibid., p. 504.

 ¹⁸³ Bieber, "The Plantation Councils of 1670-4", p. 104. A sub-committee was appointed to assess these laws, on 8 November 1672; most of the laws were considered in January, although they were still under review on 23 June. Journal of the Council of Trade and Plantations, 1672-1674, pp.5, 27-8, 30-1, 44.
 ¹⁸⁶ Plantations Journal, 1672-4, p. 38. Central oversight of colonial laws would become a source of conflict later in the decade, as Poyning's Law attempted to remove from colonial governors and assemblies the power to make laws. Bliss, *Revolution and Empire*, pp. 182-9.

Lord Willoughby of Barbados. This was partly because the Council was preoccupied with the supposed designs of the Dutch in the Caribbean, but equally it appears to have been less interested in mainland America than the more lucrative West Indies. Worsley would probably have shared this attitude; as he wrote to Willoughby, he had little doubt that 'neere a 3d parte of the interest, Trade, & stock of this Nation doth at this time depend upon the safety of our southerne Plantations'.¹⁸⁷ Such sentiments encouraged the governor that he had 'a friend in the Councell to whome I dare presume to speak plaine English'.¹⁸⁸ The Council had written to Willoughby to issue the same warnings to Barbados as it had done to Jamaica, but Worsley's letter focussed on the threat posed by England's ostensible ally, France. He therefore put it to Willoughby that should 'the French ... vigorously fall into the Spanish West Indyes; ... wee may have a worse Neighbour to deale with by much of the French, then wee have hitherto had of the Spaniard'.¹⁸⁹ Worsley had already shared such thoughts with Lynch, noting that it was as important to preserve a balance of power in the West Indies as in Europe.¹⁹⁰

Ironically, just as the French armies were marching through the Netherlands on the side of England, the Council of Trade and Plantations was engaged in settling a dispute in the West Indies left over from the last war against France. The case in question was somewhat similar to that of Surinam, although on this occasion England had managed to permanently regain their possession of the colony on St Christophers through the Treaty of Breda, after it had been lost and then recaptured from the French

¹⁸⁷ Letter, Worsley to Willoughby, 17 December 1672. PRO CO 1/29, fol. 175r (calendared in *CSPC*, 1669-1674, p. 448).

¹⁸⁸ Letter, Willoughby to Worsley, 7 March 1673. PRO CO 1/30, fol. 34r (calendared in *CSPC*, 1669-1674, p. 471).

¹⁸⁹ Letter, Worsley to Willoughby, 17 December 1672. PRO CO 1/29, fol. 175r (calendared in *CSPC*, 1669-1674, p. 448).

¹⁹⁰ Letter, Worsley to Lynch, 15 November 1672. PRO CO 1/29, fols. 140-141 (calendared in *CSPC*, 1669-1674, p. 439).

with whom they shared the island. The Treaty had required France to restore those possessions that had been plundered when St Christophers was under their control, but the failure of the French governor de Baas either to fulfil this requirement or to compensate for the extensive damage to the colony soon produced complaints directed to the crown. The question of jurisdiction was not complicated as it had been in Surinam, and it was left to a joint English-French commission to decide on what compensation was owed. Unfortunately, before his dismissal the disgraced Governor of the Leewards, Sir Charles Wheeler, entered into an agreement allowing de Baas to decide on any disputed cases. Wheeler was soon replaced by Colonel Stapleton, but it proved difficult to persuade the French to abandon their original agreement.

Worsley was ordered to make a report on the affair on 1 February 1673, which he issued on 18 February, presenting a more detailed version with Arlington and Shaftesbury in attendance a week later.¹⁹¹ These reports comprised a detailed assessment of the refusal of the French to comply with their treaty obligations, concluding that 'both his Majesty and his subjects have by reason of the arbitrariness of M. De Baas and the French Commissioners appointed by him been wrongfully kept out of those very rights which were expressly and sufficiently provided for by the Treaty of Breda'.¹⁹² On 10 April Worsley was ordered to prepare the Council's address, which after much revision was signed on 9 June.¹⁹³ This described the behaviour of the French as a direct affront to English sovereignty in the West Indies, and urged the crown to intervene on behalf of the residents of St Christopher with Louis XIV himself, offering as an incentive to drop all claims about plundered slaves.¹⁹⁴ The report was backed up

¹⁹¹ Plantations Journal, 1672-4, pp. 32, 35.

¹⁹² CSPC, 1669-1674, pp. 466-7, 469 (quote on p. 466).

¹⁹³ Plantations Journal, 1672-4, pp. 38-41.

¹⁹⁴ PRO CO 389/5, pp. 50-54. The signed copy is at PRO CO 1/30, fols. 95-6.

by a lengthy list of complaints about French behaviour, compiled by Worsley, which seemed to prove that his fears about Louis' aggressive ambitions in the West Indies were founded.¹⁹⁵

The Council's members would have been familiar with such a dispute from their experience on previous bodies, but now their responsibilities included the regulation and government of trade as well. This was a rather less clear area to supervise than the plantations, for there existed no such identifiable state agents to work through as the colonial governors, meaning that the Council could generally only react to issues brought before it. Its approach can be demonstrated by a particular case involving both manufacturing and commercial interests. On 14 January 1673 the Council heard a petition which had been presented to the crown in the previous November, by a number of merchants styling themselves the Gambia Adventurers, who traded mainly in African redwood, which was imported for use in the cloth industry.¹⁹⁶ Having read the petition again on 21 January, the following week the Council summoned the Adventurers to hear their complaint, which involved the usage of a rival dye-wood, sanders, which was imported from the East Indies and purchased by members of the Salters Company who then sold it to clothiers, so that the Gambia trade was now 'allmost totally lost & Discredited'.¹⁹⁷ The Adventurers argued that this was merely a poor quality substitute. and 'a great fraud to the Buier, in point of prise & great deceipt in the Dye or Colour it selfe, which though it looks fair to the Eye doth soon fade'. Like its 1650 predecessor, the Council had been instructed to consider how manufactures could 'be truely made and manufactured at home', so they were duty bound to consider any case which might

¹⁹⁵ Ibid., pp. 55-61.

¹⁹⁶ Plantations Journal, 1672-4, p. 26. The petition is entered in PRO CO 389/5, p. 47.

¹⁹⁷ Plantations Journal, 1672-4, p. 29.

'Discredit and prejudice' English industry.¹⁹⁸ Furthermore, sanderswood was currently only imported by the Dutch East India Company, in direct contravention of the Navigation Act. Thus the petition accused those who used this rival product as 'more minding theire Owne Lucre, then the good and Profit of his Majesties Kingdoms, Plantations, and Factorys, to the sole advantage of His Majesties Enimyes the Hollanders'.¹⁹⁹

In response, on 6 February the Council heard evidence from representatives of the Salters Company, who complained that the Adventurers tended to sell 'onely to two or three particular men', which forced the price to excessive levels.²⁰⁰ However, they did agree to purchase redwood instead of sanders if its price was reduced from £80 per tonne to a more reasonable £40. The Council therefore suggested that the Adventurers and Salters come to some agreement about setting a price, which the former agreed to providing that the Salters purchased at least 300 tonnes. This seemed to be a compromise pleasing to all groups, but the Council's attitude changed on 18 February when representatives of the Dyers Company attended to give evidence. Having conducted a trial, the Dyers found sanderswood to be 'no Lesse usefull, & necessary in Dyeing then redwood it selfe, both for goodnesse & duration of Colour'.²⁰¹ This contrasted markedly to the conclusion of the Salters, who appear to have been deliberately attempting to force the Gambia Adventurers to cut the price of redwood. But the Dyers, who had to buy from the Salter middlemen, were happy to use the cheaper substitute. Although they had been instructed to consider the improvement of English trade, the Council also had a responsibility to promote English manufacturing,

¹⁹⁸ Quoted in Andrews, "British Committees", p. 127; PRO CO 389/5, p. 49.

¹⁹⁹ PRO CO 389/5, p. 47.

²⁰⁰ Plantations Journal, 1672-4, p. 34.

²⁰¹ Ibid.

and in this case the latter took precedence. Their report of 14 April therefore concluded that rather than suppress the purchase of sanders, 'It deserves all Lawfull Encouragement from your Majestie to be Imported untill such tyme as Our East India Company can upon this Notice of its use, be able to furnish themselves a sufficient Quantety of it'.²⁰² The Gambia Adventurers must have regretted making their petition at all.

In this case the Council had managed to settle the dispute fairly quickly and efficiently, decisively concluding which party most required support in accordance with the public interest. However, such matters were not always so easily resolved, and could in fact consume much time. Such was the case with a dispute involving the duties which were paid by English merchants to maintain the crown's consul at Venice, George Hayles. Hayles petitioned the crown in September 1672 requesting that the duty be shifted from English ships, to all goods shipped by Englishmen, including those shipped in foreign vessels.²⁰³ This was referred to the Council, who summoned representatives of the Levant Company.²⁰⁴ However, the deputy governor proceeded to attack the relevance of the office of consul itself, alleging that Hayles would use a levy on goods to discover their quality and use this information to 'engross all the Trade to himselfe'.²⁰⁵ Although the Council upheld 'the Necessity of a Consull Residing at Venice', it accepted the merchants' objections to the proposed levy. Another inconclusive meeting took place a week later, before the Council managed finally to persuade the merchants to agree on an appropriate levy, which would be equal to the primage- the customary charge paid to shipmasters for care of the goods being

²⁰² PRO CO 389/5, p. 50.

²⁰³ The petition is included in Ibid., pp. 32-3.

²⁰⁴ Plantations Journal, 1672-4, pp. 7-8.

²⁰⁵ Ibid., pp. 11-12.

freighted, as an addition to ordinary freight, and rated by tonnage.²⁰⁶ The Council agreed that this was a suitable means to raise the money, but still it took four further meetings to agree on their final report, which was signed on 20 December.²⁰⁷ They had managed to reach a settlement, but this had taken up time on no less than 9 meetings.

It was difficult to see a way through the mass of detail with which the Council was faced, and discern a consistent policy of colonial or commercial government which would fulfil its original instructions. Worsley had considered one responsibility of a council of trade as arbitrating between rival parties involved in colonisation, but he can hardly have anticipated how time-consuming this would be. For example the petition of John Rodney, a former resident of Nevis, against the governor James Russell, was first read on 8 November 1672, but the Council was only able to agree on a report on 23 June 1673, and in fact the affair would eventually outlive the Council itself.²⁰⁸ This was but one of many niggling disputes which occupied much of the Council's time. Bieber concluded therefore that this and the previous Council 'took a narrow view of their function and failed, with few exceptions, to develop any general colonial policy', but this perhaps fails to account for the considerable restraints the state faced in governing at a distance: Andrews' judgement, that they 'inaugurated a policy and system of control that was more comprehensive than any which had been put into practice by the previous boards', may be closer to the intent behind the Council's deliberations, if not always their outcome.²⁰⁹

²⁰⁶ Ibid., pp. 13-16.

²⁰⁷ Ibid., pp. 17, 19-21. The report is entered in PRO CO 389/5, pp. 37-8.

²⁰⁸ Plantations Journal, 1672-4, pp. 6-7, 25, 36-7, 39-40, 43; CSPC, 1669-1674, pp. 429-431, 481-2; PRO CO 1/29, fols. 118-120; CO 1/30, fols. 101-2.

²⁰⁹ Bieber, "British Plantation Councils of 1670-4", p. 106; Andrews, "British Committees", p. 102.

Worsley himself seems to have been nothing but diligent as secretary, although in the event he was to hold this post for less than a year. His ascent in the service of Charles II had been aided by the Declaration of Indulgence, but once this was withdrawn, Worsley was forced to reassess his position. Charles could not ignore parliament forever, and in March 1673 he was forced to submit to a Test Act. This had been intended principally to exclude Catholics from office, but its demands also provoked Worsley's 'solitary, exemplary resignation', as a dissenter.²¹⁰ Worsley announced his intention to quit as early as 23 June 1673, a few days after he had finally been granted payment for his work as assistant to the Council for Foreign Plantations, but his employers were happy to keep him in office until 13 September, when he formally resigned.²¹¹ On that date the Council gathered specially to hear Worsley explain his regret at being 'made wholly incapable of performing any further Duty to them ... because of some clauses in the late Act for the preventing the growth of Popery which Act though it concerned not him at all as a Papist, nor as one that scrupled his fidelity & Allegiance to his Majestie yet it doth effect him ... as one who in the controversy about the Lords Supper did dissent from the practice of the Church of England'.²¹² In response the Council ordered 'That it should be entred in their Journalls as a Testimony to their respects to him, that their Lordships had received a satisfaction in the Attendance of the said secretary upon them and that they did approve of his services to them'. Worsley's assistant, John Locke, was sworn in on 15 October 1673;

²¹⁰ G.E. Aylmer, *The Crown's Servants. Government and Civil Service under Charles II, 1660-1685* (Oxford: Oxford U.P., 2002) p. 121.

²¹¹ W.D. Christie (ed.) Letters Addressed to Sir Joseph Williamson, Vol. 1 (London: Camden Society, 1874), pp. 60-1, 67; CTB, 1672-1675, p. 173. In fact, the Council seems to have been almost completely inactive over the summer months. Plantations Journal, 1672-4, pp. 43-45. ²¹² Plantations Journal, 1672-4, p. 46.

in his first full session as secretary, the Council was confronted with news that the Dutch had captured New York.²¹³

In fact, the commission for the Council of Trade and Plantations was withdrawn in December 1674, and even by then, the dismissal of Shaftesbury had robbed it of its most important member.²¹⁴ Although over the last four years this and the preceding Council had attempted to put their mark on colonial governance, in general it may be doubted that they had fulfilled their ambitious instructions. Thus the period of experimentation with councils of trade and plantations which spanned Worsley's career, c. 1650-74, can be judged to ultimately have failed. The impression that contemporaries recognised this is given by an address, probably by Povey, reflecting on the various councils formed since 1660:

... every one of which Councels were variously framed, instructed and encouraged, w^{ch} have all expired without any considerable advantage, or satisfaction to his Ma^{tie} or the Plantations. Among the other Reasons w^{ch} may be given, why they proved fruitless, it seems, That it is found by experience that whatsoever Council is not enable as well to execute as advise, must needs produce very imperfect and weak effects. It being, by its subordination and impotency obliged to have a continual recourse to superior Ministers, and Councells filled with other business...²¹⁵

The author therefore advised that these matters be dealt with by a committee of the Privy Council, which after 1675 was the case. A relative lack of authority was but one problem which had hindered the Council for Trade and Plantations: perhaps more difficult to surmount were the considerable difficulties which the state in general faced

²¹³ Ibid., pp. 47-8.

²¹⁴ Andrews, "British Committees", p. 111.

²¹⁵ Ibid., p. 112.

when seeking to govern distant colonies and expanding commerce, which pushed its capabilities to their limits. Thus, the ambitious statements of imperial intent of advisors like Worsley may be dismissed as irrelevant to the actual practice of colonial and commercial governance, which rather than following some design or goal, plodded on reactively, changing only gradually as the powers of the state grew. Indeed, it is hard to see a handful of aristocrats gathered in a rented private house, wondering exactly what powers were held by the governor of Jamaica as His Majesty's vice admiral in the West Indies, as amounting to the overarching supervision of an imperial state.²¹⁶ However, such a state could not emerge fully formed, and the councils of trade with which Worsley was involved represent a period of trial and error in which the state extended its supervision over the commercial and colonial world, haltingly because there was no clear blueprint for how to do so, but with increasing purpose. Throughout this period ambitions outstripped capability, but even when unfulfilled, these ambitions were instrumental in terms of setting out the future priorities of governing a commercial empire- principles which would inform the foundation of the Board of Trade and Plantations of 1696, a body linked directly to the 1672-4 Council by Locke's membership.²¹⁷

Whether Locke still made use of those papers he had copied from his former supervisor is impossible to know, but together these form something of a corpus, representing Worsley's mature vision of colonial political economy, his contribution to the discourse of trade. Most of these- the three papers to Buckingham on Jamaica, his letter to Ashley on the importance of colonial trade, and his answer to de Witt about

²¹⁶ The Council posed this query on 9 January 1673. Plantations Journal, 1672-4, p. 24.

²¹⁷ I. Steele, *Politics of Colonial Policy. The Board of Trade in Colonial Administration 1696-1720* (Oxford: Clarendon Press, 1968) pp. 4-18.

Surinam- were of relatively wide circulation as state papers, but Locke also included one of Worsley's addresses to Willoughby on the senna project, which was probably copied from Worsley's own copy. In addition, Locke included a report from the Council of Trade and Plantations discussing with statistical detail 'The State of Ireland in Reference to Trade', which Worsley was presumably mainly responsible for drafting, and which concluded with a call to unify the two nations.²¹⁸ Together, these amount to almost 30,000 words written on over 100 sides, and although never published, those who did see them were important figures in high office, establishing Worsley's importance in the development of colonial and commercial government over a period of 23 years.

Worsley's career demonstrates how the English Republic, needing to establish its tenuous existence, sought to harness the expanding world of commerce to ensure its survival, and how, facing the same problem, the Restored monarchy followed its example, with its own navigation acts and councils of trade. It would be wrong to see the Revolution as the beginning of this process, but it was a critical period in establishing the idea of trade as England's national interest: an aspect of the Revolution's legacy which Worsley both benefited from, and helped to confirm. However, we have seen that Worsley's energies were not confined to serving the state: his intellectual, scientific, and religious beliefs were influenced by the revolutionary atmosphere of the 1640's and '50's, which had been shattered in 1660. The final chapter, therefore, will examine how Worsley's wider ambitions and assumptions fared once the political conditions which had fostered them had disappeared.

²¹⁸ 'The 1661 Notebook of John Locke', Bodleian Library Microfilm 77, pp. 220-231.

8. 'Travel with Desire of Soul'.

Benjamin Worsley and the Restoration.

On 23 June 1673, William Bridgeman wrote to Sir Joseph Williamson concerning the governmental changes which resulted from the recent Test Act, whose main casualty was the Catholic Duke of York. In particular, Benjamin Worsley's resignation attracted Bridgeman's attention, and he remarked that this particular bureaucrat was 'not to bee so much as suspected as a Catholique, for I dare sweare he is far from it'.¹ His resignation raises certain questions for the historian, too. Having managed to transfer his allegiance from the Republic to Charles II apparently with relative ease, why did Worsley's conscience suddenly trouble him in 1673? And, before then, how could he justify serving a regime which seemed so opposed to the political and religious principles of the Revolution?

These questions are related to the issue of how the Restoration affected Worsley's outlook and aspirations. We have already seen how the Commonwealth's commercial goals proved useful to the restored monarchy, and by serving this regime Worsley might seem merely to have been a political opportunist or 'trimmer'. However, his resignation on a point of conscience suggests that this answer is over-simplistic. Unfortunately, there are obstacles to providing a more convincing one. Our account of Worsley relies heavily on his surviving correspondence with Samuel Hartlib, but with Hartlib's death in 1662 this source comes to an end, and we become reliant on fragmentary references in other archival collections, notably the papers of Robert Boyle.

¹ Letter, William Bridgeman to Sir Joseph Williamson, 23 June 1673. Printed in W.D. Christie (ed.) Letters Addressed to Sir Joseph Williamson, Vol. 1 (London: Camden Society, 1874) p. 59.

Boyle was one former associate of Hartlib who prospered after the Restoration, but others fared less well: Dury left England for the last time before 1660, Culpeper died in poverty in 1662, and Sadler lost most of his property, drifting into mental illness. Worsley apparently lost touch with other associates after Hartlib's demise: John Beale was still inquiring after him in January 1662, but apparently not thereafter.² The prominence of these associates in Worsley's life is perhaps inflated by the survival of the Hartlib papers, but the fact remains that after Hartlib's death the nature of our evidence for Worsley changes, and any interpretation of how he himself might have changed must take account of this.

It has been argued that Restoration society itself was changing, epitomised by the proliferation of coffee shops and the burgeoning public sphere with which they were associated.³ The formation of the Royal Society was an attempt to represent science within this environment, but Worsley did not join this institution, and he seems a rather murky figure in Restoration London, belonging to a group whose participation in public discourse was circumscribed by the Restoration- religious dissenters. Fortunately Worsley had not established a prominent public reputation in the previous decades, and once the recriminations of his feud with Petty receded, he could set about repairing his fortunes, in the first instance financially. Worsley's ample salary throughout the 1650's had been sufficient for him to attempt to purchase the Post Office farm in 1659, and the sale of his Irish lands would have probably compensated for any loss he suffered from this venture, but in 1660 Worsley found himself without a state salary for the first time in a decade. He probably waited until the mid-1660's before petitioning for

² Beale was still asking after him in a letter to Hartlib, 14 January 1662. HP: BL Add. MS 6271, fol. 10r, but they appear not to have remained in contact after then.

³ S. Pincus, ""Coffee Politicians Does Create": Coffeehouses and Restoration Political Culture", *Journal of Modern History*, 67 (December 1995) pp. 807-834.

compensation for losing the Post Office, in the meantime perhaps raising funds by selling telescopes to Beale and Winthrop.⁴ For a more permanent income, Worsley turned back to medicine, although this time not surgery. Already in 1657 Beale had been referring to Worsley as 'Dr', and after the Restoration he took up practising physic seriously, although apparently not with a license.⁵ He described himself as 'Dr. in Physick' in the London visitation records of 1664.⁶ The fact that he was a practising medic is shown by a draft list of the membership of the 1672 Trade and Plantations Council where Worsley was named as the doctor of Peter Buckworth, a notable merchant.⁷ The senna project was based on a medicinal plant, and he appears to have personally known the royal physicians who tested his samples, Fraser and Coxe, as well as the latter's namesake, Dr Daniel Coxe.⁸ Another minor acquaintance was the famed medical writer, Dr Thomas Sydenham, who apparently sent a paper in Worsley's hand to Beale, in 1665. The subject was an account of the feats of Valentine Greatrakes, the Irish 'stroker' who claimed the ability to heal by touch, and it is no surprise to find

⁴ The Post Office petition is at PRO SP 29/142 part 2, fol. 150. Beale's letter to Hartlib of 14 January 1662 mentioned that Worsley had 'enriched me to make the Hevelian prospect here from one of the fairest galleryes in England', adding that he would soon 'sollicite his contrivances for portable Tubes of largest & most various uses'. HP: BL Add. MS 6271, fol. 10r. Winthrop apparently took a telescope purchased from Worsley back to Connecticut: 'I seldom looke upon the constellations of the heavens, or the planets, especially Jupiter with my telescope, or the glorious constellation of Orion, but the most gratefull memory of your selfe is fresh to my thoughts, & soule'. Letter, John Winthrop Jnr. to Worsley, 27 October 1670. Massachusetts Institute of Historical Research, Winthrop Papers, Microfilm Reel 9. This 3 ½ foot-long telescope was one of the earliest telescopes taken to North America. See D. Yeomans, "The Origin of North American Astronomy--Seventeenth Century", *Isis*, Vol. 68, No. 3. (Sept. 1977) p. 416.

⁵ See for example letter, Beale to Hartlib, 18 April 1657. HP 62/15/1-2.

⁶ J.B. Whitmore & A.W. Hughes Clarke (eds.) "London Visitation Pedigrees 1664", *Harleian Society Publications*, Vol. XCII (1940) p. 154.

⁷ PRO 30/24/49, fol. 106r.

⁸ Letter, Daniel Coxe to Robert Boyle, 7 November 1666. Printed in Boyle: Correspondence, Vol. 3, p. 268. It is perhaps notable that Winthrop seems to have identified Worsley with other members of the English scientific-medical community, writing to him about botanical subjects along with various physicians who Worsley had previously known: Goddard, Merret, Whistler, and Kuffler. Letter, Winthrop to Henry Oldenbury, 12 November 1668. Printed in Collections of the Massachusetts Historical Society, Vol. 8, 5th series (Boston, 1882) p. 136.

Worsley's name associated with this *cause celebre* of the 1660's given his spiritual and scientific convictions.⁹

Worsley also maintained contact with Robert Boyle, by now a prominent scientific figure, and his sister Lady Ranelagh.¹⁰ Worsley hoped that Boyle would assist him in finding a wealthy investor for the senna project.¹¹ In fact, Boyle may personally have helped ease Worsley's financial problems. A letter to him from Lady Ranelagh described how shortly after the great fire in September 1666 she had discussed with Worsley the 'providence, that assisted to his preservation and that of his goods, which he probably enough thinks raised in value, as to that part of them wherein you have any interest, by the great consumption that has been of that sort of commodity, both at Sion college, and also in St. Faith's church'.¹² The 'commodity' in question was evidently books, particularly bibles, and it appears that Boyle owned a stake in Worsley's library, with the sum of £250 being mentioned in a deal which involved Sydenham as an intermediary.¹³ After his death Worsley's huge library was auctioned, and given that he appears to have had no surviving relatives, it is possible that at least part of the proceeds of this transaction went to Boyle, in return for money lent in the 1660's.

Boyle therefore continued to be a valued friend, and although by now they were far apart in terms of scientific sophistication and reputation, Worsley still wrote to him

⁹ Letter, John Beale to Robert Boyle, 7 September 1665. Printed in Boyle: *Correspondence*, Vol. 2, p. 522. This account was apparently given by one Lionel Beacher, 'sometime mayor of Biddiford'. Greatrakes visited England from January to May 1666, attempting to demonstrate his healing powers to Charles II amongst others, including Boyle. See. N. Steneck, "Greatrakes the Stroker: The Interpretations of Historians", *Isis*, Vol. 73, No. 2 (June 1982) pp. 160-177. B. Kaplan, "Greatrakes the Stroker: The Interpretations of His Contemporaries", *Isis*, Vol. 73, No. 2 (June 1982) pp. 178-185.

¹⁰ For example, Henry Oldenburg reported to Boyle in October 1664 that he had met Worsley on the Exchange, who was waiting for Boyle to reply to a letter of his. Letter, Oldenbury to Boyle, 20 October 1664. Printed in Boyle: *Correspondence*, Vol. 2, p. 361.

¹¹ Letter, Katherine Jones, Lady Ranelagh to Robert Boyle. 12 September 1666. Printed in Boyle: *Correspondence*, Vol. 3, p 235.

¹² Ibid., p. 234.

¹³ Ibid., p. 235.

about natural philosophy, on one occasion regarding some phosphorous wood which he came across during his period of absence from London, during the plague.¹⁴ Along with his interest in producing exotic plants in the colonies, this suggests that Worsley continued to pursue natural history after the Restoration, and we shall see that he had not forgotten his alchemical ambitions, either.

Thus we have some evidence for Worsley's private life in the 1660's, but his return to public service in 1668 is much better documented. He moved to Westminster, literally close to the heart of the regime.¹⁵ This might seem an overt betrayal of the principles he once held, but this regime was not simply a 'monolith of royalist and anglican reaction'.¹⁶ We saw in chapter 7 that in the 1660's the staunchest supporters of a strong alliance between the clergy and the monarchy sat in parliament, whilst the king himself was open to alternative strategies for governing religion. Whether Charles was motivated by sympathy for Catholicism or the desire to gain greater independence from parliament concerns us less than the fact that he was willing to listen to the advice of former Cromwellians. Under Clarendon this tendency was contained, but his fall, and the rise of a number of ambitious courtier-politicians in his place, saw this change. Of those 'Cabal' ministers with whom Worsley had contact, Ashley and Buckingham were notable defenders of nonconformity, whilst Arlington's Catholic tendencies encouraged

¹⁴ Boyle compiled this letter, which was written from Theobalds, in his work-diary. Letter, Worsley to Boyle, 30 October 1665. Printed in Printed in Boyle: *Correspondence*, Vol. 2, p. 569. Boyle later included this information in his *Mechanical Production of Light*, introduced as 'from a certain learned doctor'.

¹⁵ Worsley was residing in Tuttle fields in Westminster, 'right over against *the Military Ground next to* Mr William Brewers', by 1670. Letter, Worsley to John Winthrop junior, c. June 1670. Massachusetts Institute of Historical Research, Winthrop Papers, Microfilm Reel 9.

¹⁶ M. Goldie, "Danby, the Bishops and the Whigs", in *The Politics of Religion in Restoration England*, ed. T. Harris, P. Seaward, & M. Goldie (Oxford: Oxford U.P., 1990) p. 75.

him to explore the possibilities of toleration. The years 1667-1673 may have been the first 'crisis' of the restored monarchy, but this was also seen by many as an opportunity to remodel the Restoration settlement so as to strengthen the state, or simply to further their own careers.¹⁷ Worsley was one of those dissenters happy to benefit from this change of climate, and it is no coincidence that his return to state service spanned precisely these years.

The aspect of the Restoration settlement that was questioned most was the place of Protestant dissenters, a matter of conscience which had ramifications about the nature of the confessional state, its role in enforcing religious obedience and uniformity, and the status of the national church.¹⁸ Those advocating liberty of conscience tended to emphasise the monarch's responsibility to defend the public good, protecting the material welfare of his subjects and ensuring that the nation was not plagued by conflicts over conscience. One pamphlet supporting liberty of conscience began by wishing that 'we might study and debate how to advance the Glory, Riches and Power of this Nation', rather than argue over minor points of religion.¹⁹ Prosperity united the nation, and the state's role was primarily to uphold this rather than to enforce any particular form of Protestantism. Thus the discourse of toleration became linked to the discourse of trade, and it is no coincidence that the late 1660's were a formative period for John Locke's views on both toleration and commerce.²⁰ Liberty of conscience and improvement of trade were often seen as complementary, and perhaps this is why the

¹⁷ G. De Krey, "The First Restoration Crisis: Conscience and Coercion in London, 1667-73", Albion, 25, 4 (Winter 1993) pp. 565-580.

¹⁸ G. De Krey, "Rethinking the Restoration: Dissenting Cases for Conscience, 1667-1672", *Historical Journal*, 38, 1 (1995) pp. 53-83; Coffey, *Persecution and Toleration*, pp. 171-2.

¹⁹ A Letter to a Member of this Parliament, for Liberty of Conscience (London, 1668) p. 3.

²⁰ J. Marshall, John Locke. Resistance, Religion and Responsibility (Cambridge: Cambridge U.P., 1994) pp. 49-62. For Locke's mature arguments on toleration, see his A Letter Concerning Toleration (originally published 1689) ed. J. Tully (Indianapolis: Hackett, 1983).

Council of Trade in 1668 was suspected by the Duke of York to be a subversive strategy of Buckingham and Ashley to promote nonconformity, something which the presence of individuals like Child, Titus, Papillon, and the secretary Peter du Moulin, as well as Worsley, seemed to prove.²¹ This body may not have posed any threat to the government, but York was right to see its formation as potentially part of an attempt to rework the Restoration settlement, supported by individuals who were rather too admiring of the policies of the English and Dutch republics.

Despite these republican associations, religious toleration was portrayed by its promoters as the joint interest of the king and the nation.²² This was the case in Slingsby Bethel's *Et à Dracone*, which presented a typical diagnosis of the decay of trade, to which he offered many remedies to improve the circulation of 'Trading-stock', the '*Life-blood* of our *body Politick*'.²³ As well as the usual commercial methods, Bethel asserted that 'the *richest*, most *active*, *industrious*, *thriving* part of these Tradesmen' were the dissenters, and thus their persecution created 'a great hole in the *Trading-stock of the Nation*'.²⁴ Liberty of conscience, like trade, was 'not only the Common Interest of all the Nation, but especially of his Majesty', who could rely on the loyalty of those nonconformists whose religious rights he protected.²⁵ The state had no business in infringing on individual conscience, but it was still not entirely secular, retaining a role in governing public religion and defending international Protestantism against absolutist popery. Those calling for liberty of conscience were vulnerable to accusations of being

²² De Krey, "Rethinking the Restoration", pp, 60-63.

²¹ Letwin, *The Origins of Scientific Economics*, pp. 21-24. See also Roger North's retrospective comments, noted in Andrews, "British Committees", pp. 92-3. On du Moulin, K.H.D. Haley, *William of Orange and the English Opposition 1672-4* (Oxford: Clarendon Press, 1953).

²³ [S. Bethel], Et à Dracone: Or, some Reflections upon a Discourse called Omnia à Belo comesta (London, 1668) p. 3.

²⁴ Ibid., pp. 9-10.

²⁵ [S. Bethel], The Present Interest of England Stated (London, 1671) p. 13.

lukewarm about opposing Catholicism, and so writers like Bethel asserted their Protestant credentials, in the process adding a different dimension to their anti-popery. Protestant polemicists often used the popish counter-example as a 'negative image' to highlight what they believed should be the true religion, 'a symbolic means of labelling and expelling trends and tendencies which seemed ... to threaten the integrity of a Protestant England'.²⁶ Therefore by stressing the connection between Protestantism and prosperity, writers like Bethel also transformed the image of the popish nation, so that the 'notion of popery became a complex one, referring to all of the means by which human flourishing, both material and spiritual, was prevented'.²⁷ This binary inversion appeared in Bethel's The World's Mistake in Oliver Cromwell, with its caricature of popish nations impoverished by parasitic clergy, idle friars, and wasteful holidays.²⁸ Nor was this stereotype confined to polemical pamphleteers: the Council of Trade and Plantations' report on Ireland in 1673 highlighted these same factors as causing Ireland's poverty.²⁹ Thus we see that during the Restoration, and in particular within the toleration debates of 1668-73, there developed 'a distinctly commercialist (and, one is tempted to say, proto-Weberian) account of how Protestant states are more prosperous than priestly ones': the political economy of anti-popery.³⁰

Calls for toleration might appear as direct challenges to Charles II and the Restoration state, a conspiracy of the parliamentarians and radicals of the 1640's and '50's. However, political alignments had changed since then, and the case of the

²⁶ P. Lake, "Anti-Popery: the Structure of a Prejudice", in *The English Civil War*, ed. R. Cust & A. Hughes (London: Arnold, 1997) p. 183.

²⁷ M. Goldie, "The Civil Religion of James Harrington", in The Languages of Political Theory in Early-Modern Europe, ed. A. Pagden (Cambridge: Cambridge U.P., 1987) p. 200.

 ²⁸ [S. Bethel], *The World's Mistake in Oliver Cromwell* (London, 1668) pp. 17-18.
 ²⁹ 'Considerations relating to the improvem*ent* of Ireland The State of Ireland in Reference to Trade', report of the Council of Trade and Plantations dated 25 March 1673. Included in 'The 1661 Notebook of John Locke', Bodleian Library Microfilm 77, pp. 220-231

³⁰ Goldie, "The Civil Religion of James Harrington", p. 221.

tolerationists actually relied on upholding the royal supremacy over the church against parliament and the clergy.³¹ Meanwhile their vision of the patriot king ruling over a prosperous and happy nation had some appeal to Charles, who was not above courting support from nonconformists, if only out of fear of subversion.³² Lord Arlington monitored nonconformist behaviour for the crown, and Worsley wrote to him about 'whether it would not tend greatly to the honour of our nation' to settle 'all our maine differences about Religion'.³³ In late 1671, his name appeared in the notes taken by Joseph Williamson regarding nonconformist meetings. One mention concerned the notorious Captain Thomas Blood, who had led the attempted kidnap of Ormond in December 1670, and the theft of the crown jewels in the following May. After his capture Blood had been pardoned, and went on to become Arlington's agent, acting as an intermediary between the crown and dissenters.³⁴ Blood later complained that Worsley had endeavoured to 'ruin him with Lord Arlington', and so perhaps Worsley was his rival for Arlington's patronage.³⁵ He appears to have acted as a go-between for Arlington and two Scottish Presbyterians who arrived in London in late 1671.³⁶ Worsley was also known to another famous advocate of toleration, Andrew Marvell. In December 1671 he was enlisted by Marvell to gather information from his associates in

³¹ M. Goldie, "Priestcraft and the Birth of Whiggism", in *Political Discourse in Early Modern Britain*, ed. N. Phillipson & Q. Skinner (Cambridge: Cambridge U.P., 1993) p. 225.

³² For Charles' equivocation over the question of religious dissent, see J. Miller, *Charles II* (London: Weidenfeld & Nicolson, 1991) pp. 154-7.

³³ Letter, Worsley to Arlington, undated (c. 1668-73). PRO SP 29/143, fol. 55r. *CSPD*, 1665-6, p. 174. Although calandared under 1665, this letter was probably written when Worsley was serving on one of the councils of trade or plantations of 1668-73, because it mentioned the lack of a settled place for such a council to meet and requested that he be paid his arrears. For negotiations between representatives of the regime and the nonconformists, Miller, *Charles II*, pp. 188-191.

³⁴ Greaves, *Enemies Under His Feet*, pp. 204-215; A. Marshall, "Colonel Thomas Blood and the Restoration Political Scene", *Historical Journal*, 32, 3 (1989) pp. 561-582.

³⁵ Greaves, *Enemies Under his Feet*, p. 221; *CSPD*, 1671-2, p. 46. Worsley's distrust of Blood was not unique: in December 1671 Williamson reported that the 'phanaticks...will not trust him any longer'. Quoted in Marshall, "Thomas Blood", p. 571.

³⁶ CSPD, 1671-2, p. 29; CSPD, Charles II: Addenda (1660-85), p. 342; Greaves, Enemies Under his Feet, pp. 220-1

the West Country regarding a possible bride for the son of Marvell's patron, Phillip Lord Wharton (another high-profile defender of nonconformists).³⁷ In the event Worsley's source, Francis Hart, proved to be an unreliable nonconformist seeking Wharton's protection, but this episode attests to Worsley's relative prominence in dissenting circles.³⁸

The efforts of those seeking Protestant toleration bore fruit in 1672, with the Declaration of Indulgence, which neutralised any potential radical threat which the Third Anglo-Dutch war may have precipitated.³⁹ Worsley went on to enjoy a year of professional success- even Petty was forced to acknowledge that he was 'a person of very good qualification'.⁴⁰ But we have seen that this did not last, and Worsley was an unintended casualty of the Test Act of 1673. The oath which this Act required from officeholders was a scruple too far for him: it was also a restatement of the goals of the confessional state defending religious uniformity, the first step back to Danby's rapprochement between the crown and Anglicanism. This alliance held firm until 1678, and so when Worsley left state employment in 1673, it was for the last time.

³⁷ Five letters from Worsley on this matter survive. Bodleian Library, MS Rawlinson Letters: 50, fols. 123-133, 149.

³⁸ See Hart's letter to Wharton, Ibid., fol. 135r. On meeting the lady in question, Wharton's son found that she was only 16 years old and hardly a beauty, whilst her family warned him to avoid having anything to do with Hart, he being 'not only a weake, but a foolish indiscreet fellow'. Ibid., fol. 197v. ³⁹ Greaves, *Enemies Under His Feet*, p. 224.

⁴⁰ Letter, Petty to Mr Tomkins, 7 December 1672. Add. MS 72858, fol. 57v. Petty was attempting to complete a business deal concerning Ireland with this Mr Tomkins, who was apparently a great correspondent of Worsley's and hoped to involve him in the deal- which would have made from some interesting dealings.

By then Worsley was in his mid-fifties, and perhaps glad to be free of public responsibilities. The last four years of his life are relatively obscure. Soon after his resignation orders were issued for Worsley to deliver those official books and papers he still possessed to his successor Locke; apparently he was still using these as a bargaining point when petitioning to have the remainder of his salary paid, in October 1675.⁴¹ However he remained respectable enough to provide assistance to another dissenting associate in trouble with the law, the radical publisher Francis Smith, who in 1674 was imprisoned for publishing Henry Danvers' A Treatise of Baptism (London, 1673).⁴² Having been notified of 'this poore mans Case ... by some friends & some persons of Quality', Worsley wrote a certificate claiming that Smith was innocent of any seditious intent, and the victim of a vendetta.⁴³ Thereafter he became involved in a controversy with Smith's accuser, Samuel Mearne, a Warden of the Stationers' Company, who went on to make allegations against Worsley himself.⁴⁴ Despite his retirement, Worsley was evidently disturbed at having his credit damaged in the eyes of

⁴¹ Orders for Worsley to deliver those papers in his possession are noted in *CSPD*, 1673, p. 591; *CSPC*, 1669-1674, p. 531; *CSPC*, 1675-1676, p. 183. He was summoned to account for these papers on 18 March 1675. *CSPC*, 1674-1675, p. 186. A money warrant had been issued for the remainder of Worsley's salary to be paid on 21 December 1674, by the treasury. *CTB*, 1672-1675, p. 579. However, this order was evidently not performed for, on 5 October 1675, Worsley petitioned for his salary to be paid, with the treasury replying that it would be paid once the 'order mentioned in the petition' was fulfilled: this presumably concerned the papers in question. *CTB*, 1672-1675, p. 339. Possibly Worsley then submitted the remaining papers in return for his salary thereafter, but as late as 1685 (8 years after his death) the government's auditor was attempting to contact him to account for the monies he had disbursed as secretary to the Plantations Council, as part of a general auditing of government revenue. *CTB*, 1685-1689, p. 37. Worsley was not the only figure associated with the Council of Trade and Plantations who had to petition to be paid his salary: on 20 May 1674 he issued a certificate for his clerks and officers confirming that they had not been fully paid. *CSPC*, 1669-1674, p. 582.

⁴² On Smith, M. Knights, *Politics and Opinion in Crisis, 1678-81* (Cambridge: Cambridge U.P., 1994) pp. 160, 163; G. Kitchin, *Sir Roger L'Estrange* (London: Kegan Paul, 1913) pp. 113-5.

⁴³ Worsley's certificate to William Bridgeman, 11 February 1674. PRO SP 29/360, fol. 277r.
⁴⁴ Letter, Worsley to Bridgeman. PRO SP 29/360, fol. 279. This letter is calendared as written by Smith, but the original is in Worsley's handwriting. *CSPD*, 1673-1675, p. 146. However, the contents do not seem to fit into Worsley's biography; the letter complains that 'I have already suffered from Mr: Mearne at *the* Councell Table'. Apparently Mearne had accused the author of removing some books from 'our Companye hall'. If this was the Stationers' Company Hall, it is unclear why Worsley would have had any business there. Conceivably he wrote it on Smith's behalf (the last page of the letter is missing). Mearne and Smith had a long-running feud: see Kitchin, *Sir Roger L'Estrange*, p. 206.

former patrons, particularly Arlington, and wrote that knowing from past experience the harm that could be done 'if a man will out of sett malice invent and devize a thing utterly false'. Whether Worsley managed to repair his damaged credit is unknown, for little more is heard of him until his death, some time between 25 August and 11 September 1677.

Robert Boyle for one mourned his friend of 30 years. Lady Ranelagh wrote to console him of the 'remove of our true, honest, and ingenious friends', Worsley and Henry Oldenburg, who died just before him, adding that 'they each of them in their way diligently served their generation, and were friends to us'.⁴⁵ Ranelagh gave a warm epitaph: 'they have left no blot upon their memories (unless their not having died rich may go for one) and I hope they have carried consciences or uprightness with them, and have made their great change to their everlasting advantage'. Worsley's death was marked more publicly in the following year, when his huge library was auctioned in one of the earliest of such events to take place in England. It was noted that Boyle may have had some involvement, and this possibility is supported by the fact that Robert Hooke saw a copy of the library catalogue at Boyle's house in January 1678, 4 months before the auction began on 13 May.⁴⁶ The size of the library was such that the auction, in a house on Paternoster Row, St Paul's, was still underway on 22 May, when Hooke visited.⁴⁷ The booksellers added the collections of two unnamed individuals, as well as a large amount of stock, but Worsley's share still comprised 1857 books out of the total of 5344, and was auctioned for over £500.48 Its contents reveal the owner's appetite for

⁴⁵ Letter, Lady Ranelagh to Robert Boyle, 11 September 1677. Printed in Boyle: Correspondence, Vol. 4, pp. 454-5. ⁴⁶ The Diary of Robert Hooke, ed. H. Robinson & W. Adams (London: Wykeham, 1968) p. 340.

⁴⁷ Ibid., p. 359. Hooke purchased his own copy of the catalogue on 19 March. Ibid., p. 349. He purchased a total of 8 books at the auction, complaining however that they were rather expensive.

⁴⁸ J. Dunmore & R. Chiswell, Catalogus Librorum ... Instructissimarum Bibliothecarum Tum Clarissimi Doctissimique Viri D. Doctoris Benjaminis Worsley (London, 1678). As was conventional with such

learning, as well as his eye for profitable investment, in particular the numerous expensive bibles, including one previously owned by Pope Sixtus V which was sold for $£325s.^{49}$

In addition, the collection is rich in a broad range of topics: theological works, including several by nonconformists and Socinians; studies of Hebrew language and religion; language, grammar and education; history and politics; medicine; natural philosophy and history; and, as would be expected, alchemy and other occult sciences. Particularly popular authors included the Hebraist Johan Buxtorf (16 works); his English counterpart William Robertson, an associate of Worsley (7); another scholar interested in Judaism and oriental cultures, J.H. Hottinger (14); the humanist G.J. Vossius (13); the encyclopaedist J.H. Alsted (15) and his student Comenius (6); Faustus Socinus (14) and his disciple Crell (5); Hugo Grotius (9); John Selden (6); and Thomas Hobbes (8). Scientific authors ranged from Robert Boyle (10 works) and Pierre Gassendi (10 works, including Rand's translation of his Life of Peiresc) representing the new science, along with recent works by Gilbert, Willis, Digby, Hevelius, and Huygens; to J.R. Glauber (14) and Andrea Libavius (5), the best represented of many alchemists; Thomas Barthalin (9) prominent amongst medical writers; and Conrad Gesner (5)

catalogues, the books were divided into four main sections: theological; medical, mathematical &c; miscellaneous; and English; and were further sub-divided into folio, quatro, octavo, and duodecimo (with another category of tracts bounded in volumes). Many of the books listed in this catalogue are distinguished by the letters 'a', 'i' and 'u', with another group with no letter included. The 'a' category is the largest, comprising 2712 books; the fact that this includes many duplications suggests that it is made up of the booksellers' stock. Those listed under 'i' and 'u' are smaller collections, comprising 570 and 205 books respectively. These are clearly individual collections, with the 'u' collection containing mainly Latin books, and those under 'i' containing virtually no scientific or medical works; both reveal individual preferences. That set of books which fits in most accurately with Worsley's interests is that without a letter, and the high likelihood of this indeed comprising Worsley's is suggested by the preference of many of those few specific books which it is known that he read or owned. The collection may be compared to that of a contemporary of his, Dr John Webster, whose library contained over 1500 works and was valued at approximately £400. P. Elmer (ed.) *The Library of Dr John Webster: The Making of a Seventeenth-Century Radical* (London: Wellcome Institute for the History of Medicine, 1986) p. 15.

⁴⁹ This item, and the excellent collection of bibles in general, was noted approvingly in a marginal note on a copy in the possession of the Bodleian Library. Whitmore, "Dr Worsley being Dead", pp. 127-8.

representing natural history. Seven works of Francis Bacon were included, whilst Worsley's interest in more esoteric philosophies is indicated by Jacob Böhme (9), Robert Fludd (9) and Giordano Bruno (8), and English editions of the Rosicrucian manifestos, the *Fame and Confession* and the *Themis Aurea*. An important source for his alchemy was the 1651 English translation of Sendivogius' *New Light of Alchemy*, whilst similar ideas were to be found in works by d'Espagnet, Hartprecht, de Nuysement, and three works by Paracelsus himself.⁵⁰ Rather than being dominated by any particular subject or school of thought, however, the general tone is eclectic.

The owners of unbound pamphlets on ephemeral subjects were not noted, so the catalogue says little about the sources of Worsley's commercial ideas, although he did possess Lewes Roberts' vast *Merchants Map of Commerce* (1638). If he owned a similar proportion of these pamphlets as he did of the rest of the catalogue, then Worsley would have been well informed of the political issues and controversies of his day. Worsley died before the political crisis of 1678-83, when his sometime patron Shaftesbury led the attempt to exclude the Duke of York from the throne.⁵¹ However, it may be that he played a small role in these events, if only in the form of some posthumously published writings. In December 1683, Robert Boyle received a letter from Benjamin Furly, the Amsterdam based Quaker whose 'house was at the centre of

⁵⁰ Additionally, individual works of note include Hartlib's *Legacie of Husbandry* (3rd edition, 1655) and *Chymical Addresses* (1655), and John Beale's *Herefordshire Orchards* (1657); other works by acquaintances of his were Petty's *Reflections ... on Ireland* (1660); George Starkey's *Marrow of Alchemy* (under his pseudonym Philalethes, 1654) and *Pyrotechny Asserted* (1658); John Sadler's *Rights of the Kingdom* (1649) and *Olbia* (1660); Arnold Boate's *Philosophia Naturalis Reformata* (1641); Thomas Sydenham's *Methodus Curandi Febres* (1666); Daniel Coxe's *Discourse against the Apothecaries* (1669); Andrew Marvel's *Rehearsal Transposed* (1673); three works by John Evelyn; and Sir Henry Vane's *Retired Man's Meditations* (1655). William Clowe's *Chirurgery* (1637) and John Vigo's *Works of Chirurgery* (1586) might have been used in his surgical apprenticeship, whilst John Eyre's *Exact Surveyor* (1654) and William Leybourne's *Compleat Surveyor* (1653) would have found use when he was surveyor-general. The controversial *Treatise of Infant Baptism* by Henry Danvers (1673) is also there. ⁵¹ For accounts of this crisis and the relative importance of the issue of exclusion, see Knights, *Politics and Opinion in Crisis*; J. Scott, *Algernon Sidney and the Restoration Crisis*, *1677-1683* (Cambridge: Cambridge U.P., 1991).

the early Enlightenment', playing host to John Locke and Algernon Sidney amongst others.⁵² Only a summary of the letter survives, and this notes that its main subject was 'about Mr Worsleys Book'.⁵³ Although this may have referred to The Advocate or Free Ports, it is possible that Furly meant a more recent publication. One suggestion that this was the case is a note in a contemporary catalogue of Robert Boyle's library, in which a volume entitled 'An essay for reconciling differences among Christians', dated 1678, was described as 'Dr. Worsley's'.⁵⁴ The work which the catalogue's modern editor found to most accurately match this description was a short pamphlet published anonymously with a preface dated 13 July 1678, entitled Christian Unity Exhorted to, and addressed to an unnamed 'friend'. This was precisely the subject which Worsley had written to Arlington about some years earlier, and its stress on 'the difference between the Form and Power of Godliness' was characteristic of his religiosity.⁵⁵ So too was the belief that the majority were stricken by spiritual degeneracy, starved of 'Heavenly food':

... he is the true living substance most to be desired; all outward elementary substances can but gratifie the sensual part of man; but such hath been the deplorable state of many Nations, since the great Apostacy from that pure Spiritual worship so much exhorted to be Christ and his Disciples, that the Lord hath suffered a Cloud of darkness to over-spread the understandings of the children of men, so that they have been a long time grovelling in the dark among the earthly Elements.⁵⁶

This reminds us of the spiritualistic theosophy Worsley outlined in the late 1650's, but beyond this there is no further evidence to connect the pamphlet with him

⁵³ Boyle: Correspondence, Vol. 5, p. 376.

⁵⁴ The Early Essays and Ethics of Robert Boyle, ed. Harwood, p. 253.

⁵² Marshall, John Locke, p. 331; J. Champion, Republican Learning. John Toland and the Crisis of Christian Culture, 1696-1722 (Manchester: Manchester U.P., 2003).

⁵⁵ Christian Unity Exhorted To, sig. Alv.

⁵⁶ Ibid., p. 1.

conclusively.⁵⁷ However, Worsley had been publicly identified as author of another tract in a pamphlet defending dissenters by Richard Baxter, written in 1681. As well as his own arguments, Baxter cited another work which 'hath strenuously handled the same chief matter for Scripture Sufficiency against unnecessary Impositions', which he identified as 'a posthumous book of Dr. *Worsleys* called, *The third part of the naked Truth*'.⁵⁸ *The Naked Truth* was originally published in 1675 by the 'maverick' Bishop Herbert Croft, calling for 'moderation, church reforms, and even comprehension, while undermining the case for regarding bishops as a separate order of the ministry'.⁵⁹ It had proved popular and controversial, encouraging other authors to publish sequels. As it is unlikely that Baxter would have attributed the pamphlet to Worsley without any reason, it deserves a more extended analysis.

The pamphlet's subtitle revealed that it fell into two parts, firstly 'some serious Considerations, that are of High Concern to the Ruling Clergy of *England*, *Scotland*, or any other Protestant Nation', and secondly 'A Discovery of the Excellency of the Protestant Religion as it stands in Opposition to Papistical Delusions'.⁶⁰ This order was deliberate, but the preface (by 'a Friend of the Author') stressed the pamphlet's secondary, anti-Catholic, purpose, suggesting that '*this very Discourse may prove to be such a Mirror or Looking-Glass, to as many of that Scarlet Generation ... as will but give themselves leave seriously to look upon their own odious Pictures*'. In the context of 1681, this comment was clearly aimed against the Catholic Duke of York, suggesting

⁵⁷ There are other references reminiscent of Worsley's religiosity, for example about the importance of a 'self-denying, meek Spirit' (p. 2); the assertion that God alone 'works in thee all good acts which thou performest, so thou art but the instrument, and he the workman' (p. 5); as well as the extended water-metaphor of salvation and eternal life.

⁵⁸ R. Baxter, A Second True Defence of the Meer Nonconformists (London, 1681) pp. 11-12.

⁵⁹ J. Spurt, *The Restoration Church of England, 1646-1689* (New Haven & London: Yale U.P., 1991) pp. 71-2.

⁶⁰ The Third Part of Naked Truth (London, 1681).

that the pamphlet was part of the campaign to exclude him from the throne. However, rather than railing against arbitrary monarchical power, the pamphlet itself actually appealed to the Prince to wield his powers to rule religion with more authority and effect.

In previous years, Worsley had advised the Restoration regime on how best to govern commerce. In The Third Part of Naked Truth, if he was indeed its author, Worsley turned his attention to the government of religion, using the same language of interest. The pamphlet therefore began with a consideration of religion as a public affair, the author stating that he had 'for some time laboured and travelled with desire of Soul, to bring forth those things that have been given to me, which may tend to Peace and Unity'.⁶¹ These ideals had been casualties of the religious wars following the Reformation, and 'the business of the Christian Religion is now a thing not capable to be separated from an Affair of State'. However, the Reformation had created particular religious difficulties for the Protestant Prince. Chiefly, this was because 'the Prince having the Character or Repute only of a Secular Authority, hath not that immediate Influence upon Religion itself, or upon a Religious People, which the Clergy hath'. The dilemma for the Protestant Prince therefore was to govern religion in the interests of the public, whilst accepting his limits as a secular power with no authority in spiritual affairs. This was made difficult not by the presence of religious diversity, but of a 'Ruling Clergy' who sought to monopolise the 'whole affair of Religion' as 'Persons not only of supposed sufficiency, but of supposed Conscience and Integrity'.⁶² Whilst the national church might appear to augment the power of the sovereign, clerical advice

⁶¹ Ibid., p. 1. ⁶² Ibid., p. 2.

had frequently been 'not only imposing but very dangerous both To his Government, To his Safety, To his Honour, and to his Interest'.⁶³ This was because the clergy had its 'own interest' which was 'privately concerned' in maintaining the privileged status of the national church. History was littered with examples of Princes who had been ruined by the misleading advice of their clergy, most recently in 'those things that happened at home even in our own Countey; which have drawn a Mourning Veil upon the Records of our Times'.⁶⁴ The lesson for the Protestant Prince was clear: 'the committing of the Affairs of Religion and of the Church intirely to the Clergy without any check upon them is yet the more against the Interest of the Prince, because it layeth an express Temptation upon them, to Govern both the Church and Religion absolutely, and at their own Will'.⁶⁵

The tract therefore called on the Prince to exercise his Erastian power over religion, like Thomas Hobbes blaming the clergy for dividing the nation and weakening the Prince. However, unlike Hobbes, who sought to eradicate the indeterminate influence of the spirit on political affairs through a monolithic state religion, this author constructed a vision of politics in which the Prince defended the spirit against the incursions of the clergy, crucially by tolerating nonconformity. To demonstrate that dissent did not necessarily entail disloyalty, the author turned to the precepts of Protestantism itself. Fundamentally, the Reformation had initiated a 'restoration of the scriptures, in the Vulgar Tongue', which was the 'true glory' of Protestantism.⁶⁶ As a religion of the Word, Protestantism demanded that Scripture be obeyed before any human authority, and no 'civil, outward, or temporal Account' could stand between the

⁶³ Ibid., p. 3.

⁶⁴ Ibid., p. 4.

⁶⁵ Ibid., p. 5.

⁶⁶ Ibid., p. 6.

individual and God.⁶⁷ Any aspect of worship which was not clearly laid down in Scripture was voluntary, and as the Reformation itself demonstrated, '*a Church may Err*, and may have Corruption in it', whilst '*Scripture cannot Err*'.⁶⁸ Any Church which sought to 'constrain or exact an Obedience from her Members to her self, and to her own Authority as absolute', would therefore 'cease in her Principles and Practice to be Protestant'.⁶⁹

It was at this point in the argument that The Third Part of Naked Truth discussed Catholicism, but not to emphasise the direct threat of a Catholic monarch. Rather, Catholicism was used as a negative example to shame the 'Ruling clergy' of England out of their persecuting ways. The principal difference between the Protestant and Papist was that whilst the former obeyed Scripture before all other authorities, the latter 'takes the Authority of the Church for the whole Argument, or for the only Foundation of all his Obedience unto God'.⁷⁰ The persecution of dissent was an attempt to preserve this spiritual monopoly and impose an outward, hypocritical conformity, which was the essence of Catholicism. However, although the Protestant reformers had broken away from the Papacy to avoid the sins of spiritual absolutism, persecution, and hypocrisy, these Popish characteristics had been adopted by many supposedly Protestant Churches, whose sin was therefore all the greater: 'MUST NOT these three things be MUCH MORE EVIL in a Protestant Church? ... MUST NOT This Practice cast a manifest Blemish, and Reproach upon her own Reformation',⁷¹

⁶⁷ Ibid., p. 8.

⁶⁸ Ibid., p. 17.

⁶⁹ Ibid., p. 18.

⁷⁰ Ibid., pp. 16-17.

⁷¹ Ibid., pp. 19-20.

Rather than explicitly highlighting the danger of 'Popery and arbitrary government', as might be expected from a pamphlet written in 1681, here the main concern was with the popish behaviour of the Anglican church in persecuting dissenters, and the Prince was called on to put the clergy in their place. However, strict limits were placed on the Prince's jurisdiction over religion: because the Protestant subject owed his obedience to God prior to any civil authority, 'all human Laws if they be inconsistent either with any of those common Principles that are writ in our Nature, (which are called the common Principles of Reason) or with anything that is expressly writ in the Word of God, They are null and void in themselves'.⁷² Despite this, the author was at pains to assert that religious and political dissent were separate: 'Non-obedience or Non-conformity to any of the said Laws, though it be in a sence voluntary, yet it is neither elective nor indeed truly or properly free, And therefore that such Nonobedience is not any the least breach of affection. Nor any the least forfeiture of a mans Duty to his Prince, or to the Government'.⁷³ The only way to resolve this potential clash between spiritual and civil allegiances, therefore, was for the civil magistrate to renounce any claim to govern the spirit:

... if the Law of the Church, or the Ruling Clergy, cannot in the matter of Worship any way compel or bind men to Obedience, farther or otherwise than as they apprehend it to be agreeable to the Law of God, or to the Law of his Word: Then neither can the Law of the Prince, or the Law of the Civil Government bind mens Consciences, in the matter of Worship, further or otherwise than the Law of the Church, viz. no otherwise, than as the said Law shall appear to them to be agreeable to Gods Law, which is the Law of his Scripture or Word, And consequently it can never be avoided by any Protestant Prince, but his Authority as relating purely to things Civil, with the Efficacy of it, must stand upon one Rule;

⁷² Ibid., p. 14. ⁷³ Ibid., p. 15.

And his Authority as relating to things of Divine Worship, with the Efficacy of it, must necessarily and unavoidably stand upon another Rule.⁷⁴

Religion as a public affair was distinguished from the religion of the spirit, which remained barred to the Prince, who had to be wary of ruling religion in his own interests or persecuting dissenters: Scripture had clearly warned persecutors that Christ would 'cut them asunder and account them as Hypocrites'.⁷⁵ Those advocating toleration, however, could also be accused of hypocritically calling for the indulgence of their own sect, whilst denying it to others when in power. The degree of toleration which was being called for in The Third Part of Naked Truth is uncertain: adherence to Scripture was seen as the common denominator of Protestantism and the only essential tenet of belief, but it was left unsaid as to whether this definition would have included Socinians, for example. Although he commended its demonstration of 'Scripture Sufficiency against unnecessary Impositions', Richard Baxter was uneasy with the absence of a further definition of orthodoxy, and added his own qualifications.⁷⁶ Thus the pamphlet was, perhaps deliberately, vague about the limits of Protestant conformity, but it did give the impression that any sort of persecution was the mark of a false church, whilst the Prince's jurisdiction of the outward affairs of religion and of the spirit were distinguished. The case of Catholics was more problematic, however, as they could be portrayed as a civil threat to the Prince. No comment was made in The Third Part of Naked Truth on whether Catholics should be excluded from toleration, but given the considerable lengths to which the author went to demonstrate the falsehood of their

⁷⁴ Ibid., pp. 9-10.

⁷⁵ Ibid., p. 27.

⁷⁶ Namely, '1. That he speaketh not against the guiding determination of undetermined accidents which must be determined one way or other: As Time, Place, Utensils, Translation-words, *Metres tunes*, &c. 2. And that a man that intollerably breakes Gods Laws (by Blasphemy, Treason, Murder, Fornication, &c) is not to be tollerated because he erroniously thinks he keepeth them'. Baxter, *A Second True Defence of the Meer Nonconformists*, p. 12.

beliefs, which aimed 'to turn men from the express Word, and the Law of the Lord Christ', it seems unlikely that they would have been afforded anything resembling religious 'rights'.⁷⁷ However, Catholicism was not defined as a real, antichristian presence, so much as the embodiment of an antichristian spirit of persecution. The pamphlet was concerned much more with the ways in which this spirit infected Protestant churches, than with the resurgence of Counter-Reformation popery.⁷⁸

Although this pamphlet cannot be identified as written by Worsley with absolute certainty, there is nothing in it which contradicts this. Worsley had long advocated a minimalist interpretation of Protestantism based on scriptural fundamentals, and frequently warned against elevating any human institution above God. His religion was as spiritual as it was scriptural, and relied on the free pursuit of divine enlightenment; equally, The Third Part of Naked Truth constructed a vision of politics which defended conscience, the cultivator of the spirit. Thus it is possible to read this text as Worsley's indirect advice to the King in the aftermath of the Test Act, hoping to encourage Charles II to return to his policy of Indulgence. In the 1670's, the domination of the crown by an episcopal elite, those 'twenty six Private persons' allied with Danby, was a much more conspicuous threat to dissenters than the possibility of a Catholic succession, and The Third Part of Naked Truth implicitly looked back to 1672 and not forward to the exclusion crisis.⁷⁹ The mid-1670's therefore seem a more probable date of composition than 1681, meaning that it would have coincided with the publication of Shaftesbury and Locke's own anti-clerical and anti-Danby manifesto, A Letter from a Person of

⁷⁷ The Third Part of Naked Truth, p. 44.

⁷⁸ For an argument which stresses the latter fear as consistently driving 'England's troubles' throughout the 17th-century, J. Scott, "England's Troubles: Exhuming the Popish Plot", in *The Politics of Religion in Restoration England*, ed. Harris, Goldie, & Seaward, pp. 197-132.

⁷⁹ Ibid., p. 20. For Danby's policies, see Goldie, "Danby, the Bishops and the Whigs".

*Quality, to His Friend in the Country.*⁸⁰ Worsley was politically pragmatic, supporting whoever could best offer toleration: had he lived into the exclusion crisis, he would surely have switched his loyalties to parliament, although he may equally have been amongst those dissenters who rallied to James II when he issued his own declaration of indulgence.⁸¹ Such was the fluid nature of political alignments in the Restoration, where any simple division between royalists and parliamentarians, or Whigs and Tories, was obscured by the complex politics of religion.⁸² This meant, too, that *The Third Part of Naked Truth* could be adapted to the circumstances of 1681, published by the radical publisher Richard Janeway, and it is interesting to speculate about how the pamphlet came into print.⁸³

'Popery and arbitrary government' were not the only spectres haunting this crisis: 'the pursuit of clerical power by the forcible imposition of unnecessary creeds' was also attacked.⁸⁴ Mark Goldie has shown the centrality of anticlericalism to the birth of Whiggism, arguing that 'the essence of the Whig struggle was to prevent the English churchmen building a Protestant popery'.⁸⁵ This was precisely the concern of *The Third Part of Naked Truth*, whose central thesis was also that 'in succumbing to the clergy a patriot prince becomes a servant of a faction, and so by definition a tyrant, who betrays the common good'.⁸⁶ Goldie has also shown that, rather than being an aspect of secularisation, this anticlericalism was at heart religious, 'grounded in an unfolding

⁸⁰ For this work, Marshall, John Locke, pp. 85-7.

⁸¹ For the latter, M. Goldie, "John Locke's Circle and James II", *Historical Journal*, 35, 3 (1992) pp. 557-586.

⁸² See The Politics of Religion in Restoration England, ed. Harris, Seaward, & Goldie.

⁸³ On Janeway, Knights, *Politics and Opinion in Crisis*, p. 160. For the role of the press in this crisis in general, Ibid., pp. 153-192.

⁸⁴ Goldie, "Priestcraft and the birth of Whiggism", p. 220.

⁸⁵ Ibid., p. 218.

⁸⁶ Ibid., p. 225.

tradition of Christian reformism⁸⁷ Philosophically, the polemic against priestcraft was central to the early Enlightenment in England, again showing the continuing centrality of religious goals.⁸⁸ We have seen that the post-Reformation concern to overcome corrupt human customs and directly access divine truth- a crisis of faith not in God, but in man-loomed large in Worsley's intellectual response to a whole range of issues, religious, philosophical, and political. According to Goldie, anticlericalism, the Restoration toleration debate, and the idea of civil religion were at the heart of 'the transformation of the Puritan into the Whig'; Worsley was neither, but it may be that the life of this individual, who linked Sir Henry Vane to John Locke, tells us something of this shift.⁸⁹

The Third Part of Naked Truth perhaps answers some of those questions noted at the start of this chapter, revealing that its author saw the malevolent influence of the 'ruling clergy' as the main threat to conscience; by distinguishing the civil and spiritual aspects of religion, and confining the Prince to the former, the integrity of the spirit was preserved. Public power focussed exclusively on worldly affairs, and so Worsley could serve the Restoration state with his conscience clean, as long as this state offered a bulwark against clerical persecution, as seemed to be case until 1673. Thus, Worsley was able to adapt his loyalties to the changing political climate, but in the process he appears to retreat further from the ideal of 'universal reform' which Charles Webster

⁸⁷ Ibid., p. 211. For the complexity of religious change in late-17th-century England, B. Worden, "The question of secularization", in *A Nation Transformed*, ed. Houston & Pincus, pp. 20-40; M. Knights, "Meer religion' and the 'church-state' of Restoration England: the impact and ideology of James II's declarations of indulgence", in Ibid., pp. 41-70.

⁸⁸ As well as Goldie, see Champion, *The Pillars of Priestcraft Shaken & Republican Learning*.
⁸⁹ Goldie, "Priestcraft and the birth of Whiggism", p. 215.

attributed to him. Perhaps Worsley now saw the millennium in purely spiritual terms, divorced from the corrupt 'spirit of the world'.

In the late 1650's, Worsley's religion had become increasingly spiritualistic, but this was not confined to introspection, and for a time incorporated the material goals of alchemy. After 1660 the evidence that Worsley continued to be interested in this subject is sparse. His 1670 letter to Winthrop, another practitioner, referred to certain alchemical 'Literature' which 'doth not advance so very fast as it did seem a while since to threaten that it would And yet there doth something Appear as if it were strugling for a Birth that may have a tendency of Blessing to the world'.⁹⁰ Winthrop responded to this tantalising reference with a series of questions, but the lack of a reply prevents us fully understanding what Worsley was referring to. This would be the disappointing end of the story, if it were not for existence of one remarkable source: a letter, written in Latin, and sent to Boyle on 25 August 1677 just a few weeks before Worsley's death was reported.⁹¹ As the editors of Boyle's correspondence have noted, this appears to be a valedictory statement in which Worsley reflected on over two decades of his alchemical labour. It began by reporting that 'after a great deal of expense, after suffering the greatest distress, and after almost countless, and extremely painful troubles', involving both reading books and 'investigating medicine', Worsley could finally report that he was 'master of the thing I sought'.⁹² The note apparently accompanied a sample of this treasure, for Worsley went on to exclaim 'And lo! I now present to you that most

⁹¹ Letter. Worsley to Robert Boyle, 25 August 1677. Printed and translated in Boyle: Correspondence, Vol. 5, pp. 452-4. Ranelagh mentioned Worsley's death in her letter to Robert Boyle, 11 September [1677], printed in Ibid., pp. 454-5. ⁹² Ibid., p. 452.

⁹⁰ Letter, Worsley to John Winthrop junior, c. June 1670. Massachusetts Institute of Historical Research, Winthrop Papers, Microfilm Reel 9.

famous and truly metallic oil, which is called the oil of the philosophers, and which is described under many other names'.

What, then, were the virtues of this substance? Firstly, Worsley described it as 'a living fountain (if there is any such thing) flowing indeed from the very lap of Nature herself, coming forth without any addition either of any menstruum'- some sort of liquid form of the philosopher's stone, or as he termed it, 'the water-stone of the wise'. Furthermore, he claimed that 'this oil is that green oil of Paracelsus, which is said to contain the whole crasis of vitriol, and for that reason is not corrosive', adding that it was 'the cleanest, purest, and most penetrating in the whole world', and therefore 'the most incorrupt'.⁹³ Finally, it was a medicine, containing contrary properties of masculine and feminine, sun and moon, and sulphur and mercury. If we recall that alchemy incorporated complex ideas about the structure and growth of metals, then certain gualities of Worsley's 'metallic oil' become clearer. Its purity, incorruptibility, and penetrability were traditionally key virtues of alchemical mercuries or elixirs, and clear signs of transmutational ability, whilst by referring to Paracelsus and the vitriolic essence of his 'green oil', Worsley afforded an elevated place to a sophic salt.

The precise composition of this exalted substance is obscure, and the vague claims which Worsley made about its properties are perhaps less important than the sense of excitement with which he announced it. However, we can explain the apparent meaning of some of its properties in terms of the Worsley's earlier alchemical ideas. Worsley claimed that his success in producing his 'green oil' came only after 'tremendous patience; for although we have been by now involved with it for a period of twenty-two years without a break, nevertheless during that period of time it has been

⁹³ Ibid., p. 453.

seen by me a mere three times, and only now have I completed it'. Whether Worsley had successfully performed that 'Phylosophicall putrefaction' which he highlighted 22 years previously, is unknown, but the reference to the oil being a 'living fountain', flowing from 'the very lap of Nature', suggests that this liquid was related to the 'pure and spermaticke substance' which he previously claimed was the life-giving property within all bodies.⁹⁴ If so, then no wonder he valued his discovery so highly, for when used as a medicine such a substance might indeed hold the key to defeating mortality, the possibility of which he had speculated about in another letter to Boyle.⁹⁵ Worsley concluded with 'a rare and amazing paradox ... namely, a man who is by no means rich, nevertheless has by virtue of this experiment both the right and the power of deciding on and adopting for himself an heir who will be rich beyond the riches of most men (if not kings), and who will be well instructed and equipped in medicine'.⁹⁶ Perhaps Worsley was choosing Robert Boyle, who had little need for material riches, as his alchemical heir.

If so, then Boyle did not have long to wait to claim his inheritance. The fact that Worsley died so soon after writing this valediction suggests that he may already have been ill, and looking to bring his alchemical labours to some sort of meaningful conclusion. As John Young has written, 'seekers of the stone' like Worsley, usually 'found what they were looking for because they defined their results in terms of what they were expecting to find'.⁹⁷ At least for minor practitioners, the importance of the various oils, elixirs, and powders for which they made such fantastic claims lay not so

⁹⁴ Letter, Worsley to [Clodius], c. July 1654. HP 42/1/26B.

⁹⁵ See, in particular, his mention of 'the healing Water of an incorruptible fountain'. Letter, [Worsley] to [Boyle], c. late 1658-early 1659. HP 60/2/4A.
⁹⁶ Letter, Worsley to Robert Boyle, 25 August 1677. Printed and translated in Boyle: Correspondence,

³⁶ Letter, Worsley to Robert Boyle, 25 August 1677. Printed and translated in Boyle: Correspondence, Vol. 5, pp. 454.

⁹⁷ Young, Faith, Medical Alchemy and Natural Philosophy, p. 172.

much in their substantive effects, as their ability to confirm a pre-conceived philosophy of the world. It is perhaps not too extravagant to suggest, therefore, that for Worsley the discovery of his 'green oil' represented more than just proof of his skills as an adept: it was a motif for faith itself, a metaphor for his search for certain knowledge of divine truth. Looking back on the turbulent years through which he had lived, which seemed so often to confound any search for divine meaning in changeable human affairs, Worsley found that there was a stable core of universal truth, embodied by this 'universal spirit'. However great the gulf between human and the divine might seem to be, he had finally confirmed that the spiritual was indeed present in this corrupt world.

ļ

Conclusion.

This thesis has considered the life of one individual within a variety of contexts, including the history of commercial and colonial policy, the development of experimental science, and intellectual change in general, across geographical locations ranging from London, Ireland and Amsterdam, to the global trade routes in which they were set. The conclusion will attempt to bring these strands together, but before doing so a brief reminder of the course of the thesis is in order.

Part One considered Benjamin Worsley's life up to 1649, when he pursued a variety of vocations having left his original career, as a surgeon. Surgery furnished him with intellectual and technical skills, as well as the entrepreneurial ethos, which he later deployed, and his first state-salaried post, as surgeon-general to the army in Ireland. Impressive as this title was, Worsley was financially insecure when returning to his native London in 1644, and his saltpetre project intended to rectify this. For assistance, Worsley turned to Samuel Hartlib and his circle, adapting the ends of the project to suit his new allies by stressing the commercial benefits of industrially producing saltpetre, for example in his imperialistic design, 'Proffits humbly presented to this Kingdome'. In London, Worsley was introduced to a younger man also searching for a vocation, Robert Boyle, beginning a relationship which spanned Worsley's life. During the late 1640's he drew closer to the Hartlib circle, eventually acquiring a position of trust which allowed him to visit Amsterdam with their support, in order to learn the art of alchemy. However, his lack of success led Worsley to become frustrated with the life of the projector, and he began to look for state employment instead. Thereafter, Worsley's

320

interest in natural philosophy became less utilitarian, concentrating on theoretical and increasingly spiritual issues.

Part Two looked at Worsley's life in the 1650's, beginning with his employment as secretary to the Council of Trade from 1650-1. Exploiting mercantile and political contacts, Worsley secured this position by demonstrating his knowledge of commerce, enlisting ideas which were part of a pre-existent discourse of trade in a way suitable to the new regime. This combination of continuity and innovation also marked the Commonwealth's commercial policy in general, which Worsley defended in two official pamphlets, The Advocate and Free Ports. Although the Council of Trade was not an unqualified success, Worsley's employment as its secretary enhanced his reputation, allowing him to be employed as surveyor-general in Ireland. However, his ascent stuttered there, thanks to the machinations of William Petty, and Worsley became increasingly disillusioned with Cromwellian rule. Intellectually, this was also a period of frustration, as Worsley struggled to uphold his sometimes extravagant claims to be pursuing a 'great work' in alchemy. The theories to which he adhered centred on identifying the active spirit of organic and metallic matter, and these proved particularly conducive to his spiritual reflections, which became influenced by radical religious groups in Ireland. His relationship with these army radicals involved Worsley in political opposition to Henry Cromwell's regime, culminating in his involvement with the parliamentary and military regimes which replaced the Protectorate.

The Restoration, therefore, threatened to cast Worsley back into obscurity. However, he proved remarkably successful at adapting to this new climate, as was shown in Part Three. Partly this was because of the willingness of Charles II's government to adopt the commercial policies of the Commonwealth, notably through its

321

navigation acts and councils of trade. Worsley was able to regain his post as secretary to one of these bodies by adapting the ideas of the discourse of trade to the needs of this new regime, which proved to be similar to those of the Commonwealth. Once again, his career illustrates broader developments in commercial policy, as the state attempted to govern trade with greater effect. This basically secular conception of public power suited Worsley, who accommodated his spiritual convictions by distinguishing between the civil and spiritual spheres, a perspective shown in the pamphlet The Third Part of Naked Truth, which he probably authored. Thus Worsley was able to serve the restored monarchy, as long as it offered a potential bulwark against clerical persecution. This ceased to be the case in 1673, when the Test Act forced Worsley's resignation, and he presumably spent his last years honing his skills as an adept, before producing that cherished elixir which apparently confirmed his alchemical and spiritual beliefs. Thus by the time he died, in 1677, Worsley may perhaps have found contentment in knowing that his life's labours were not in vain.

According to Charles Webster, the various strands of Worsley's biography were brought together by 'universal reform', an ultimately spiritual ethic which nevertheless shaped his material goals: the saltpetre project, the Invisible College, and the Navigation Act all had a part to play in elevating England to prosperity and power, made possible by the Puritan Revolution. Universal reform linked Puritanism, millenarianism, the belief in a worldly utopia, dominion over nature, advancement of learning, social activism, and political revolution, in a fairly direct way. Indeed Worsley himself often stated his belief in the inter-relatedness of the spiritual and secular, and strove to be a 'universal scholar'. However, if many of the ingredients of universal reform have been discussed in this study, these have not necessarily comprised so coherent a programme as the phrase suggests. Similarly, whereas for Webster Worsley was an exemplary representative of the 'spiritual brotherhood' of Puritan social and intellectual reformers, to a degree this study has distanced Worsley from the Hartlib circle, revealing elements of dissonance amongst its participants.

This has not been with the intent of denying the significance of the Hartlib circle in Worsley's life, or in the intellectual history of period in general. Similarly, no attempt has been made to deny the reality of the Hartlib circle, for Hartlib did indeed consciously situate himself at the centre of a social and intellectual network, which was animated by shared goals, although not all of those who deployed Hartlib's agency necessarily subscribed to his aims.¹ Worsley aligned himself with the Hartlib circle to a greater degree than most, wholeheartedly participating in their discussions, but these exchanges did not always lead to concord, and we have seen various points of divergence between Worsley and his Hartlibian allies: Culpeper's disapproval of the nationalism of 'Profitts humbly presented', Worsley's disagreement with Dury regarding Georg Horne's anti-papal crusade, or his protracted battle with Petty, certainly the most damaging schism between Hartlib's protégés. The seriousness of this dispute was not just a consequence of its ferocity, for it also reflected a more fundamental contest over the legacy of the Puritan Revolution, which reveals something of the fate of universal reform in revolutionary England.

¹ Greengrass, Leslie & Raylor, "Introduction" to SHUR, pp. 246-7.

In fact, this was not just a dispute within the Hartlib circle, but specifically amongst members of its younger, indigenous generation who had come under the influence of 'the three foreigners' and their ideals. Hotson's study of the continental background of Hartlib, Dury and Comenius revealed their debt to a Central European tradition of 'further reform', epitomised by the figure of J.H. Alsted, whose encyclopaedic universalism aimed at the reformation of society and learning in a way which prefigured the efforts of the Hartlib circle.² Here, reformation went hand-in-hand with the state-building aspirations of the godly princes of central Europe, an alliance of secular and spiritual goals which was reflected in 'Hartlib's enduring desire to use the state during the English Commonwealth and Protectorate, as an instrument for social, religious and intellectual change'.³ However, although it drew inspiration from the Reformation, this tradition absorbed 'alien influences from beyond the margins of orthodoxy'.⁴ Thus Alsted's hermeticism furnished him with the tools to envisage a reformation of the individual, which Hartlib, Dury, and particularly Comenius transmitted to Puritan England alongside the societal reformation focussed on in The Great Instauration.⁵ Of these two dimensions of universal reform, we might expect Worsley, a civil servant who appreciated the power of the state, to have prioritised statesponsored reformation, but in fact his allegiances lay more with the internal reformation that sought to restore the fractured image of God in man.

Whilst Webster saw Worsley's religious aspirations as mainly directed outwards, into the reformation of the world, this study has revealed an intense

² Hotson, Johann Heinrich Alsted.

³ M. Greengrass, "Samuel Hartlib and International Calvinism", *Proceedings of the Huguenot Society* XXV, 5 (1993) p. 466.

⁴ Hotson, Johann Heinrich Alsted, p. 233.

⁵ D. Ĉapková, "The Comenian Group in England and Comenius' Ideal of Universal Reform", Acta Comeniana, 1 (1970) pp. 25-34.

spiritualism which focussed on an inward reformation. Partly this reflected his encounter with the sects who blossomed during the Revolution, but Worsley's 'theosophy' also drew on Hartlibian influences. Thus whilst he shared with the former a negative sense of human worthlessness and corruption, he also voiced his conviction that this could be overcome through a fusion of religious and human enlightenment similar to Comenius' *Pansophy*. Worsley in fact extended the limits of human perfectability by claiming that mortality itself could be reversed. This would be a consequence primarily of embracing the spirit of the light, but immortality would not result from spiritual struggle alone, and Worsley's theosophy absorbed more conventionally scientific goals, including medicine, alchemy, and above all the search for energy, that 'universal spirit' of life.

Thus Worsley's natural philosophy was shaped by spiritual goals, but in a less utilitarian way than Webster suggested. Webster's overriding concern was to show that the utopianism of Puritans like Worsley did not necessarily conflict with serious scientific pursuits, but could in fact encourage them, as epitomised by the Invisible College. Because of the paucity of evidence, this putative organisation can no longer be afforded so central a place in either Worsley or Boyle's intellectual biographies, however, leaving Worsley's role in the 'scientific revolution' uncertain. A case can still be made for Worsley exerting a more important influence on Boyle's natural philosophy than some accounts allow, but to suggest that this is the only way in which his scientific ideas are of interest is to do him an injustice. Primarily, Worsley was an adherent of alchemical theories about the energising properties of a philosophical salt, *sal nitrum*, best represented by the Polish adept Sendivogius. The role of alchemy and other occult arts in the scientific revolution is now well appreciated, and many aspects of the

325

'magical' tradition were absorbed by the new science, for example the experimental method or the idea of occult forces.⁶ However, it is hard to evaluate any positive contribution which Worsley made to these shifts, and at times he has appeared a rather frustrated scientist or adept. Indeed the gulf between his aspirations and experimental practice was at times wide, perhaps suggesting that his natural philosophy warrants attention only as a footnote in the lives of his more successful acquaintances like Boyle or George Starkey. Worsley's example seems to show how the English scientific community as a whole was changing, as more sophisticated ideas and higher standards began increasingly to relegate a part-time practitioner like him from the position of contributor to scientific 'progress', to a consumer of it. Membership of the Royal Society may have allowed Worsley to continue to participate in this community, but his omission from this body rendered him marginal.

Thus Worsley was more-or-less forgotten as a scientist, until Webster rescued him from obscurity. However, the problems in Webster's account of the Invisible College should not condemn him to be forgotten once more, for Worsley still helps us understand the scientific culture of his period. For example, Worsley's uncertain reaction to the ideas of Descartes and Hobbes was no means confined to an amateur scientist like him, and is illustrative of the way in which the acceptance of mechanism by English scientists entailed its redefinition.⁷ Worsley's unease with mechanism, and his attachment to *sal nitrum* ideas, reflected a concern to locate the presence of the divine within the material, and the fact that he was able to blend natural philosophy and his personal spiritual convictions shows the broad cultural presence of scientific ideas,

⁶ J. Henry, "Magic and Science in The Sixteenth and Seventeenth Centuries", in *The Compendium to the History of Modern Science*, pp. 583-596; C. Webster, *From Paracelsus to Newton. Magic and the Making of Modern Science* (Cambridge: Cambridge U.P., 1982).

⁷ See Osler, Divine Will and the Mechanical Philosophy, pp. 222-236.

yet to be monopolised by the scientist. Worsley's theosophy was not confined to the spiritual, therefore, and found its material adjunct in the alchemical labour which culminated with his 'green oil'. However, it seems likely that Worsley valued this substance for its spiritual as much as its material significance, according this a greater level of reality than the corrupt material world, which would not survive the apocalyptic changes to come.

Although the presence of the millennium has loomed throughout this thesis, the meaning which Worsley afforded to it was not stable. Even at that apocalyptic zenith of 1651-2, Worsley questioned whether God's will for the Commonwealth was clear. In fact, the degree to which millenarianism offered a clear course of action even for Hartlib and Dury may be questioned, for the latter by then was also moving away from an overtly literal reading of biblical prophecies.⁸ But whereas for Dury this was based on a fear that millenarianism could disrupt the political and religious order which the Commonwealth and later the Protectorate sought to establish, under Cromwell Worsley began to see the ruling regime itself as the cause of this spiritual darkness. This did not lift until the end of the decade, when Worsley apparently began to expect the arrival of Christ's kingdom. However, even this was not literal millenarianism: like the young Alsted, Worsley pinned his hopes on an imminent apocalypse, when antichrist would be defeated and the world would end. Thus in 1659 his apocalypticism entailed the destruction of an ungodly regime, the Protectorate, more than the construction of a worldly utopia. Worsley probably saw this as preparing the way for the return of Christ

⁸ K. Firth, *The Apocalyptic Tradition in Reformation Britain 1530-1643* (Oxford: Oxford U.P., 1979) pp. 243-5. Millenarianism of the type purveyed by Jospeh Mede was not shared by all members of the Hartlib circle: for example Gabriel Plattes, author of the utopian 'manifesto' *Macaria*, condemned 'our hot *Apocalyps* men, and fierce expounders of *Daniel*, who are sure, in their owne conceit, that they have such divine revelations, that they cannot possibly be deceived'. *A Discovery of Infinite Treasure* (London, 1639) sig. B2r.

by defeating persecution and allowing spiritual freedom, rather than creating a theocratic regime in a Fifth Monarchist sense.⁹ He had already begun to describe the apocalypse in basically spiritual terms, as the victory of light over dark leading to spiritual perfection. The millennium would be the product of communion between likeminded spirits, made possible by the free pursuit of religious truth, rather than through direct political action.

Thus, after the Restoration, the political principle Worsley continued to adhere to long after he had abandoned any allegiance to a republic, was liberty of conscience. It would be wrong to see this as a repudiation of the goals of the Hartlib circle, for many of its members had been amongst the strongest defenders of toleration during the Revolution. However, this did not shake the commitment of Hartlib and Dury to the joint reformation of church and state, imitating the Central European second reformation.¹⁰ At first glance, it might be expected that the sympathetic political leaders of the parliamentary cause in the Civil War would have sponsored such a reformation. However, the Revolution equally precipitated a challenge to the relationship between church and state, and particularly the authority of the state over conscience. William Petty's response was to deny (like Hobbes) that the spiritual had any place in politics, advising Henry Cromwell to focus on social order and material rule. Worsley reacted with hostility to this 'godless rule', but ultimately he too distinguished between the civil and the spiritual, confining the state to the former in order not to deny the reality of the spirit, but to preserve its integrity.¹¹

⁹ B. Capp, The Fifth Monarchy Men: A Study in Seventeenth-Century English Millenarianism (London: Faber & Faber, 1972).

¹⁰ See for example Dury's call for parliament to enact Reformation in his tract, Considerations Tending to the Happy Accomplishment of England's Reformation in Church and State (London, 1647).

¹¹ Lamont, Godly Rule, pp. 136-143.

By refusing the state a role in advancing spiritual goals, Worsley moved a step away from universal reform. Partly this was a reaction to the developments of the English Revolution itself, but Worsley had already demonstrated a sense of relativism which existed uneasily alongside the universalism of Hartlib and Dury. Throughout this study we have seen Worsley evoke self-interest as the force which drove individual actions- he certainly never lost sight of his own, and the competitive ethos of the projector did not desert him. Worsley was not uncritical of self-interest, however, and the preface to The Advocate portrayed apocalypse in terms of the overthrowing of ambition and pride, the desires on which society was built. Worsley was similarly sceptical about political affairs, an exercise of power rather than principle, and therefore invariably tending to corruption. Power also determined the course of international relations, and thus Worsley called for the aggressive defence of commerce by the state against its competitors, an economic nationalism potentially at odds with the Protestant internationalism of the Hartlib circle. Culpeper seems to have noticed that this subverted the utopianism of 'Proffits humbly presented to this Kingdome', but in truth Worsley was never much of a utopian, unwilling to trust corrupt human institutions to advance spiritual goals. Although he evoked the identity of the spiritual and material in his natural philosophy, in his understanding of human affairs he held an Augustinian sense of the gulf between this world and the next. Religion had to be purged of those corrupt human additions which obscured the search for divine truth. Thus the spiritual and the civil were ultimately incompatible, and Worsley apparently drew a clear distinction between the authority of the Prince over the two, in *The Third Part of Naked Truth*.

Thus whilst Hartlib and Dury sought to transmit the ideals of the Central European second reformation throughout the Protestant world, Worsley saw this world as divided into competing nation-states; whereas the former aimed at a universal reformation of church and state, Worsley's relativism led him to divorce the corrupt secular from the spiritual, elevating the reformation of the individual above that of society. To this extent his life reveals not so much the successes of universal reform in revolutionary England, as its diffusion into many smaller projects, and ultimately the spiritualism of a Restoration dissenter. However, if Worsley rejected the spiritual uses of state power in enacting reformation, he certainly embraced Hartlib's positive attitude towards the state as an engine of social and economic transformation. When freed from confessional responsibilities, the state would be able to concentrate on advancing the sort of material goals which Worsley argued for throughout his career, as a state expert in the government of commerce.

Steven Pincus has recently argued that the English Revolution precipitated an upheaval in political culture, leading to the abandonment of the religious and universalist goals which informed early Stuart politics; thereafter, it was increasingly the case that political economy was adopted as the interest of state.¹² Worsley's move away from the Protestant internationalism of the Hartlib circle fits in with this account, as does the narrative of commercial policy which his career reveals. However, this study has been careful to show that this was part of long-term trends which predated the Revolution, and owed much to traditional, commonwealth ideals. The Introduction

¹² S. Pincus, "From holy cause to economic interest: the study of population and the invention of the state", in *A Nation Transformed*, ed. Houston & Pincus, pp. 272-298.

extended this narrative back into the 16th-century, and the expansion in market activity which resulted in a new understanding of society as fundamentally competitive, affording the state a greater role over economic affairs. The 16th-century also saw the beginnings of commercial expansion, whereby English merchants began to travel farther afield, notably to southern markets extending from the Levant to the East Indies. The initial way in which the state sought to cultivate these luxury trades was through issuing company charters, but the growing complexity of overseas trade over the early Stuart period increasingly made this appear insufficient. The committee founded in 1622 marked the beginning of a period of experimentation with the conciliar government of trade, of which Worsley's career was a part. A key aim of these councils of trade was to emulate the major commercial power of the time, the United Provinces, by diversifying exports and markets, developing the carrying trade and becoming the 'warehouse of the world'.

By the time that parliament was recalled in 1640, therefore, it was faced with numerous calls to defend and advance trade, but no clear formula for how to do so. Given the historic association between parliament and free trade, the companies might have expected to face a strong challenge, but mercantile allegiance was not so clear-cut as this suggests. Instead, following parliament's victory rival merchant groups were willing to compete for privilege from the new regime, with the emerging colonial trades being particularly rich pickings. Brenner saw the 'new merchants' as representing a challenge to the traditional monopolistic regulation of commerce, but in their willingness to ally with the regime in return for exclusive privileges, their behaviour was not so different from that of the company merchants. Association with Maurice Thomson certainly aided Worsley's ascent in state service, but ultimately he posited

331

himself as a supposedly impartial observer of commerce. His position as secretary to the Commonwealth's Council of Trade was the first fruit of this strategy, and the erection of this body reveals that the regime was indeed hoping that commercial success would establish the Republic in a hostile world.

In some ways, the survey of the Council of Trade in this thesis has endorsed the more negative conclusions about its importance within the regime as a whole. However, in ideological terms the significance of the Council of Trade, and the approach to governing commerce it represented, grew posthumously, contributing to a shift in the political language of interest of state, which increasingly prioritised commerce. Similarly, in terms of the content of commercial policy, the Commonwealth did impart a distinctive approach, characterised by the direct government of trade by the state, rather than the companies. The Navigation Act was the main product of this ethos, and Worsley's pamphlet The Advocate its clearest exposition at the time. This Act took over the defensive role of the companies by excluding foreign shipping, but it also had a more positive aim of expanding the nation's carrying trade, helping to create that 'universal magazine' which Worsley's other pamphlet, Free Ports, envisaged. Although it was questioned whether these features ever amounted to a specifically republican ideology of trade, they became firmly established as the central goals of commercial policy under the Commonwealth. Perhaps the legacy of the Council of Trade may be seen in a continuing tendency to associate republicanism with commercial progress, carefully cultivated by the state, a tradition epitomised by a figure like Thomas Paine

332

for whom 'the true principle of the republic is thus, not self-sacrificing virtue, but intelligent public patronage'.¹³

However, any republican association did not prevent the Restored monarchy from adopting a similar approach to governing commerce, allowing Worsley to resume his public career. Thus his senna project fulfilled a similar role as the saltpetre project, allowing Worsley to advertise his expertise in commercial affairs in a way which suited the monarchy. This project also signified the increasing priority which Worsley gave to colonial trade, now seen as the sole answer to England's commercial problems. Thanks to the Navigation Act, colonial trade would allow commercial expansion without the fear of becoming dependent on another nation, and Worsley argued for its importance in a series of papers issued to statesmen including Ashley, Buckingham and Arlington. Although the navigation system was aimed particularly against Dutch commercial power, Worsley increasingly identified a new threat to England's imperial status, in the form of the aggressive French monarchy. Anglo-French rivalry in the Atlantic was for Worsley the conflict of rival empires, in which the old Spanish empire became a pawn, necessitating a strategic reconfiguration of English diplomacy.

Once again, the vehicles for Worsley's career were the trade and plantation councils on which he sat from 1668-73. Of these, the 1672 Council was most consistent with his advice about the ideal means to govern trade, and appropriately Worsley was made its secretary. However, if the imperial intent of these bodies became increasingly ambitious, their actual activities remained mired in detail, and this study has shown how much time was spent on such forgotten corners of empire as Surinam and St

¹³ D. Wootton, "Introduction: The Republican Tradition: From Commonwealth to Common Sense", in *Republicanism, Liberty, and Commercial Society, 1649-1776*, ed. D. Wootton (Stanford: Stanford U.P., 1994) p. 39.

Christophers. These remind us that English, indeed European, imperialism was still a relatively insecure phenomenon in which vulnerable colonial outposts often clung to a precarious existence, caught up in inter-European conflicts. Similarly, the imperial oversight which the Council of Trade and Plantations attempted to institute remained relatively weak, and Worsley's ambitious programmes were to an extent unfulfilled. The decision to discontinue the 1672 Council and revert to the administration of commerce via a Privy Council committee seems to mark the relative failure of the councils of trade of the previous 50-years. However, it is more appropriate to see this period as one of experimentation, through which the future terms of governing England's commercial empire were set. In this, Worsley's career reflects larger developments which would have occurred without him, and rather than being personally responsible for any innovation in commercial policy, he can be seen as merely repackaging commonplace ideas for the benefit of statesmen. However, his career has an importance that is more than simply illustrative: Worsley's particular strategy was to situate himself between the social elites who traditionally governed the nation, and the privately interested merchants who could not be trusted to govern themselves. In doing so, he identified his personal interests with those of the state, helping to create the 'functional space' for those permanent civil servants who would one day staff the imperial state that Britain became.

It would be wrong to see his career as marking the death of the confessional state and the birth of an imperial one, for to talk of 'the state' as a single entity is to reify what was an imagined entity with many faces, whose role was contested. The commercial state which Worsley portrayed was an idealisation, therefore, but one which found more and more advocates throughout his lifetime. Increasingly, the state was seen

334

as an institution whose main role was to defend the material interests of its inhabitants, a nation united by economic interests and the advancement of trade, something which supporters of the confessional 'church-state' could subscribe to alongside tolerationists like Worsley.¹⁴ But for Worsley the same moral relativism which led him to desacralize the state and see it instead as an engine for material progress also justified the aggressive economic nationalism of the navigation system, the colonial domination and slave trade on which this relied, and the amoral conflict of rival empires which would be its legacy. A Europe dominated by relative, and not universal, values, pragmatism rather than religious idealism, would by no means be free from the bloodshed that had blighted the age of confessional conflict from which it emerged.

This study has sought to go beyond its biographical format to illuminate the historical period it has covered, namely the middle decades of the 17th-century. This has been based on the belief that biography allows us to appreciate the full complexity of a past society, rather like Worsley looking in wonder at the infinite variety of God's creation through the microscope, making us as resistant to mono-causal explanations of historical change as he was of reductionist mathematical accounts of nature. But it might be argued that what this approach gains in our understanding of the historical context, is lost in terms of our insight into the individual himself. It is appropriate, therefore, that this thesis should conclude by considering what it has revealed of

¹⁴ For the idea of the public as an 'economic community', G. Baldwin, "The 'public' as a rhetorical community in early modern England", in *Communities in early modern England. Networks, place, rhetoric*, ed. A. Shepard & P. Withington (Manchester & New York: Manchester U.P., 2000) p. 211.

Worsley's personality. Indeed, this is an interesting period to write biography, when the nature of the self itself was in flux, from Hobbes' mechanistic interpretation of self-interested psychology and the 'economic man' at the centre of commercial thought, to the attempts of the sectarians to extinguish the self and unite with God; we have also encountered the transformation of the self required of the alchemist, and the individual reformation which alchemical labour might help achieve. As this last example suggests, for Worsley and his contemporaries, an understanding of the self hinged on resolving the paradoxical relationship between fallen man, corrupt and worthless before God, and man as God's creation, made in His image and capable of redemption and even perfection.

Worsley, at times, assumed each of these identities. He boasted of his genius, his insight into the art of alchemy, only to express fears that he was an 'impostor', unable to achieve anything of worth. Religiously, Worsley veered between confidence that he had some great role to play in a divine plan, and doubt that God's will could be known by men at all. Although he expressed his absolute spiritual worthlessness and degeneracy, he nonetheless hoped to assume a state of divine enlightenment. But his understanding of the spirit decried worldly affairs as inherently corrupt, and Worsley frequently presented human nature as fundamentally self-interested, only to portray himself as a public spirit, pursuing his various projects on behalf of the public good rather than personal gain. Seeming at once to epitomise the spirit of commercial expansion which he so often commented on, and a reaction against this materialistic ethos, there seems little consistency in Worsley's identity, which becomes lost amidst various performances, buried in the past.

336

However, to assume that any one of these particular identities represents Worsley's 'true self' is to perpetuate a fiction, the existence of a single, coherent self, a Cartesian homunculus looking out from within the individual. Rather than unmask Worsley's various performances and reveal the actor behind them, all we can do is attempt to collect as many details about Worsley's life and writings that survive, and piece together a story with some coherence if not completeness. This study has not attempted to reduce Worsley's personality to one overriding impulse or ambition, but rather to suggest a complex and in many ways ambiguous character. Ambitious and worldly and yet obsessed with the state of his spirit, confident to the point of arrogance but contorted by self-doubt, striving for recognition and yet never fully stepping into the public light, Worsley absorbed and responded to the paradoxes of his age. He has been described as 'evidently a man of considerable charm, with an acute brain and eclectic imagination', and without disputing this, it is fair to say that Worsley did not always cover himself in glory: although he managed to retain some degree of consistency in his conscience, to an extent this was achieved by renouncing moral responsibility over almost all affairs which were not directly spiritual.¹⁵ Thus whilst in private Worsley condemned the material world, in practice he embraced it with an ambition that led him sometimes to exploit the good will of his friends and perhaps abandon his allies, whilst when dealing with his enemies he was the equal of William Petty, in ruthlessness if not wit. It has been astutely suggested that 'his ultimate skill was survival', and if this was the case, then perhaps Benjamin Worsley represents as well as any of his contemporaries the turbulent times through which he lived.¹⁶

¹⁵ Young, Faith, Medical Alchemy and Natural Philosophy, p. 218.

¹⁶ By R. Zaller, in his entry for Worsley in R.L. Greaves & R. Zaller, (eds.) *Biographical Dictionary of British Radicals in the Seventeenth Century* (Brighton: Harvester Press, 1982) Vol. 3, p. 342.

Bibliography.

(i) Manuscript Sources.

Bodleian Library, Oxford.

Clarendon MS 75. Letter, Worsley to Lady Clarendon, 8 November 1661 (fols. 300-1).

Rawlinson MS A473. Samuel Pepys' manuscript copy of *Free Ports* (pp. 53-64).

Rawlinson MS A478. Arlington's colonial papers, including papers by Worsley (fols. 32-7, 61-2, 65-72).

Rawlinson Letters: 50. Includes letters from Worsley to Andrew Marvell.

Microfilm 77. 'The 1661 Notebook of John Locke', including several papers by Worsley on colonies and trade (pp. 158-265).

Microfilm 496. Journal of the Council of Trade and Plantations, 1672-1674 (original copy possessed by the Library of Congress, Washington).

British Library, London.

Add. MS 4106. Worsley's letter, 29 July 1653 (fols. 224-5).

Add. MS 5138. The Council of Trade's deliberations on free ports (fols. 145-164).

Add. MS 11410. Papers on Jamaica, including one by Worsley (pp. 623-74).

Add. MS 72850, 72858. William Petty's letterbooks.

Add. MS 78685. John Evelyn's letterbook. Includes copy of Worsley's letter to Beale, 1660 (fols. 103-4).

Egerton MS 2395. Thomas Povey's colonial papers.

Landsdowne MS 821. Worsley's letter to Henry Cromwell, 17 March 1657 (fols. 352-3). Sloane MS 427. Copy of Worsley's letter to Beale, 1660 (fols. 65-66).

Sloane MS 648. Hartlibian letter on spiritual alchemy (fols. 99-100).

Sloane MS 3662. Lieutenant-General William Byam's Journal of Surinam, 1665-7 (fols. 27-37).

Guildhall Library, London.

MS 5257/5. Company of Barber-Surgeons, Court Minute Books, Volume V (Copy held on microfilm).

MS 5265/1 Company of Barber-Surgeons, Register of Admissions (Copy held on microfilm).

Corporation of London Record Office, Guildhall Library, London.

Records of the Court of Aldermen, Rep. 58 (1645-1647).

Public Record Office, London.

C 24/812, part 2. Worsley's deposition in the Chancery suit, Burlace Vs Troughton.

CO 1/20. Worsley's senna petition (fols. 282-3).

CO 1/29, 30. Colonial state papers, including Worsley's correspondence with colonial governors.

CO 278/2. Colonial entry book concerning Surinam.

CO 389/5. Council of Trade and Plantations: entry book.

SP 18/16. Reports of the Council of Trade on fraudulent manufacturing (fols. 54-5, 267-9).

SP 28/210. Book of Orders for the Kent Committee of Sequestrations (includes Worsley's letter on behalf of Sir George Wentworth, 29 May 1645, fols. 71).

SP 29/142, part 2. Worsley's post-office petition (fol. 150). SP 29/143.

Worsley's letter to Arlington (fol. 55).

SP 29/360.

Worsley's certificate and letter for Francis Smith (fols. 277, 279).

SP 68.

Worsley certificate for Samuel Goodwin (fol. 330).

30/24/49.

Shaftesbury's papers on trade and the colonies, including papers by Worsley (fols. 37-48, 86-9, 221-7).

Ipswich Record Office.

Aldeburgh Borough Records. EE1/P4/9. Includes reply of the Corporation of the Borough of Aldeburgh to the Council of Trade.

Massachusetts Historical Society, Boston.

Winthrop Papers, microfilm reels 7 & 9.

(ii) Pre-1700 Pamphlets.

Arceus, F., A Most Excellent and Compendious Method of curing wounds in the head, trans. J. Read (London, 1586).

Battie, J., The Merchants Remonstrance (London, 1644).

Baxter, R., A Second True Defence of the Meer Nonconformists (London, 1681).

Bethel, S., Et à Dracone: Or, some Reflections upon a Discourse called Omnia à Belo comesta (London, 1668).

----- The World's Mistake in Oliver Cromwell (London, 1668).

----- The Present Interest of England Stated (London, 1671).

----- An Account of the French Usurpation upon the Trade of England (London, 1679).

Bridge, J., Warren, E., Warren, A., A Perfect Narrative of the Grounds & Reasons moving Some Officers of the Army in Ireland to the Securing of the Castle of Dublin for the Parlament (London, January 23 1660).

Brugis, T., The Discovery of a Proiector (London, 1641).

Bullock, W., Virginia Impartially Examin'd (London, 1649).

Carter, W., Englands Interest by Trade Asserted (London, 1671).

Chappel, S., A Diamond or Rich Jewel (London, 1651).

Child, J., Brief Observations concerning Trade and Interest of Money (London, 1668).

----- A New Discourse of Trade (London, 1693).

Christian Unity Exhorted To (London, 1668).

Coke, R., A Discourse of Trade (London, 1670).

Crooke, H., A Description of the Body of a Man (London, 1637).

Culpeper, C., An Essay upon Mr. W. Potters Designe (London, 1653).

Dunmore, J., & Chiswell, R., Catalogus Librorum ... Instructissimarum Bibliothecarum Tum Clarissimi Doctissimique Viri D. Doctoris Benjaminis Worsley (London, 1678).

du Rohan, H., A Treatise of the Interest of the Princes and States of Christendome (London, 1641).

Dury, J., A Faithfull and Seasonable Advice (London, 1643).

------ Considerations Tending to the Happy Accomplishment of Englands Reformation in Church and State (London, 1647).

Dymock, C., A Discovery for New Divisions, or, Setting out of Lands (London, 1653).

Fortrey, S., Englands Interest and Improvement, 2nd edition (London, 1673).

The Frogs of Egypt. Or The Caterpillers of the Common-Wealth (London, 1641).

Gardner, R., Englands Grievance Discovered, in relation to the Coal-Trade (London, 1655).

Gassendi, P., The Mirrour of True Nobility & Gentility. Being the Life of The Renowned Nicolaus Claudius Fabricius Lord Peiresk, trans. W. Rand (London, 1657).

Gentleman, T., The Best Way to make England the Richest and Wealthiest Kingdome in Europe, by Advancing the Fishing-Trade (London, 1660).

The Grand Concernments of England Ensured (London, October 25 1659).

Hariot, T., A Briefe and true report of the new found land of Virginia (London, 1590).

Hartlib, S., (ed.) The Necessity of some Nearer Conjunction and Correspondency amongst Evangelicall Protestants (London, 1644).

------ Londons Charity Inlarged (London, 1650).

----- Chymical and Medicinal Addresses (London, 1655).

----- (ed.) The Reformed Commonwealth of Bees (London, 1655).

----- (ed.) Samuel Hartlib his Legacie of Husbandrie, 3rd edition (London, 1655).

Hogs Caracter of a Projector (London, 1642).

The Impartial Scout, Number 59 (2-9 August 1650).

Interest of Money Mistaken, Or a Treatise, Proving, that the Abatement of Interest is the Effect and not the Cause of the Riches of a Nation (London, 1668).

Jenner, T., Londons Blame, if not its Shame (London, 1651).

Johnson, T., A Discourse Consisting of Motives for the Enlargement and Freedome of Trade (London, 1645).

----- A Plea for Free-Mans Liberties (London, 1646).

Keymer, J., A Cleare and Evident Way for enriching the Nations of England and Ireland (London, 1650).

------ Sir Walter Raleigh's Observations, Touching Trade & Commerce (London, 1653).

A Letter to a Member of this Parliament, for Liberty of Conscience (London, 1668).

Long-Parliament-Work (London, June 9 1659).

Maddison, R., Great Britains Remembrancer, Looking In and Out (London, 1654).

Misselden, E., The Circle of Commerce, or, The Ballance of Trade, in defence of Free Trade (London, 1623).

Mun, T., A Discourse of Trade, From England to the East-Indies (London, 1621).

----- Englands Treasure by Forraign Trade (London, 1664).

A Pack of Patentees. Opened. Shuffled. Cut. Dealt. And Played (London, 1641).

Parker, H., Of a Free Trade (London, 1648).

Peter, H., Good Work for a Good Magistrate. Or, A short Cut to great quiet (London, 1651).

Petty, W., A Brief of Proceedings between Sr. Hierome Sankey and Dr. William Petty (London, 1659).

----- Reflections on Some Persons and Things in Ireland (London, 1660).

Plattes, G., A Discovery of Infinite Treasure (London, 1639).

----- A Description of the Famous Kingdome of Macaria (London, 1641).

Potter, W., The Key of Wealth (London, 1650).

----- The Trades-Man's Jewel (London, 1650).

------ Humble Proposalls to the Honorable the Councell for Trade (London, 1651).

The Proceedings at the Council for Trade, Between the Muscovia Company, Monopolizers of the Trade to Green-Land, and others, Adventurers thither, For a Free-Trade (London, 1652).

Reynel, C., The True English Interest, Or an Account of the Chief National Improvements (London, 1674).

Robertson, W., *The Second Gate, or The Inner Door to the Holy Tongue* (London, 1654).

Robinson, H., Englands Safety in Trades Encrease (London, 1641).

------ A Short Discourse between Monarchical and Aristocratical Government (London, 1649).

------ Briefe Considerations, Concerning the Advancement of Trade and Navigation (London, 1650).

------ Certain Proposals in order to the Peoples Freedome and Accomodation (London, 1652).

Severall Proposals for the Generall Good of the Commonwealth (London, 1651).

The Soap-Makers Complaint (London, 1650).

S., W., The Golden Fleece, Wherein is related the Riches of English Wools in its Manufactures (London, 1656).

A Treatise Wherein is Demonstrated, That the East-India Trade is the most National of all Foreign Trades (London, 1681).

Violet, T., The Advancement of Merchandize (London, 1651).

----- Mysteries and Secrets of Trade and Mint-affairs (London, 1653).

von Frankenburg, A., Clavis Apocalyptica: Or, A Prophetical Key (London, 1651).

Wheeler, W., Mr. William Wheelers Case from his own Relation (London, 1644) (sometimes attributed to Henry Parker).

------ A List of Some Chief Workes Which Mr William Wheeler Offereth to undertake (Amsterdam, 1651).

Worsley, B., [pseud. 'Philopatris'] The Advocate (London, 1651).

----- Free Ports, The Nature and Necessitie of them Stated (London, 1652).

----- [?] The Third Part of Naked Truth (London, 1681).

(iii) Modern editions of pre-1700 pamphlets and manuscripts.

Bannerman, W., (ed.) "Registers of St. Olave, Hart Street, London, 1563-1700", *Harleian Society Registers*, Vol. 46 (London, 1916).

Birch, T., (ed.) A Collection of the State Papers of John Thurloe, vol. 6 (London, 1742).

Boyle, R., *The Works of the Honourable Robert Boyle*, ed. T. Birch, 2nd edition (London, 1772) 6 vols.

----- The Early Essays and Ethics of Robert Boyle, ed. J.T. Harwood (Carbondale & Edwardsville: Southern Illinois University Press, 1991).

------ The Works of Robert Boyle, ed. M. Hunter & E. Davis (London: Pickering & Chatto, 1999) 14 vols.

----- The Correspondence of Robert Boyle, ed. M. Hunter, A. Clericuzio, & L. Principe (London: Pickering & Chatto, 2001) 6 vols.

Browning, A., (ed.) Thomas Osborne, Earl of Danby and Duke of Leeds, 1632-1712. Vol. II: Letters (Glasgow: Jackson & Son, 1951).

Burtchaeli, G.D., & Sadlier, T.U., (eds.) Alumni Dublinenses. A Register of the Students, Graduates, Professors and Provosts of Trinity College in the University of Dublin (1593-1860) (Dublin: Alex, Thomson & Co., 1935).

Calendar of State Papers, Colonial.

Calendar of State Papers, Domestic.

Calendar of State Papers, Ireland.

Calendar of Treasury Books.

Chester, J.S., (ed.) "The Parish Registers of St Mary Aldermary, London, 1558-1751", Harleian Society Registers, Vol. 5 (London, 1880).

Christie, W.D., (ed.) Letters Addressed to Sir Joseph Williamson, Vol. 1 (London: Camden Society New Series Volume 8, 1874).

Corcoran, T., (ed.) State Policy in Irish Education AD 1536 to 1816 (Dublin, 1916).

Culpeper, C., "The Letters of Sir Cheney Culpeper (1641-1657)", ed. M. Braddick & M. Greengrass, *Camden Miscellany*, XXXIII, Fifth Series, Volume 7 (Cambridge: Cambridge U.P., 1996) pp.105-402.

Defoe, D., An Essay upon Projects (facsimile of the first edition of 1697) (Menston: The Scolar Press, 1969).

Dunlop, R., (ed.) Ireland Under the Commonwealth, Being a selection of documents relating to the government of Ireland from 1651 to 1659 (Manchester: Manchester U.P., 1913).

Elmer, P., (ed.) *The Library of Dr John Webster: The Making of a Seventeenth-Century Radical* (London: Wellcome Institute for the History of Medicine, 1986).

Evelyn, J., *The Diary of John Evelyn*, ed. E.S. Beer (London: Oxford University Press, 1959).

Firth, C.H., & Rait, R.S., (eds.) Acts and Ordinances of the Interregnum, 2 volumes (London: Wyman & Sons, 1911).

The Hartlib Papers. Electronic Edition, 2nd edition (Sheffield: HR Online, 2002).

Historical Manuscripts Commission, Ormonde, Vol. I (London, 1902).

----- Ormonde, Vol. II (London, 1903).

----- Egmont, Vol. 1 (London, 1905).

----- Hastings, Vol. II (London, 1930).

----- De L'Isle and Dudley, Vol. VI (London, 1966).

Hobbes, T., *Leviathan* (originally published 1651) ed. C.B. Macpherson (London: Penguin, 1968).

Hooke, R., *The Diary of Robert Hooke*, ed. H. Robinson & W. Adams (London: Wykeham, 1968).

Jensen, M., (ed.) English Historical Documents Volume IX. American Colonial Documents to 1776 (London: Eyre & Spottiswoode, 1955).

Journals of the House of Commons, Vol. V.

Journals of the House of Lords, Vols. VII, VIII.

Locke, J., A Letter Concerning Toleration, ed. J. Tully (Indianapolis: Hackett, 1983).

----- Locke on Money, ed. P.H. Kelly (Oxford: Clarendon Press, 1991).

----- Two Treatises of Government, ed. M. Goldie (London: Everyman, 1993).

Ludlow, E., The Memoirs of Edmund Ludlow 1625-72, ed. C.H. Firth, Vol. 1 (Oxford, 1894).

MacLysaght, E., (ed.) "Commonwealth State Accounts 1653-56", Analecta Hibernia, No. 15 (Dublin: Irish MSS Commission, 1944).

McCulloch, J.R., (ed.) Early English Tracts on Commerce (Cambridge, 1856).

--

Oster, M., (ed.) Science in Europe, 1500-1800. A Primary Sources Reader (Basingstoke & New York: Palgrave, 2002).

Pender, S., (ed.) A Census of Ireland, Circa 1659 (Dublin: Irish Manuscripts Commission, 1939).

Petty, W., History of the Cromwellian Survey of Ireland, A.D. 1655-6, Commonly Called 'The Down Survey', ed. T.C. Larcom (Dublin: Irish Archaeological Society, 1851).

----- The Economic Writings of Sir William Petty, ed. C.H. Hull (Cambridge: Cambridge U.P., 1899).

Sainsbury, E.B., (ed.) A Calendar of the Court Minutes etc. of the East India Company. 1644-1649 (Oxford: Clarendon Press, 1912).

----- (ed.) A Calendar of the Court Minutes etc. of the East India Company. 1650-1654 (Oxford: Clarendon Press, 1913).

Sharp, A., (ed.) The English Levellers (Cambridge: Cambridge U.P., 1998).

Smith, T., A Discourse of the Commonweal of this Realm of England ed. Mary Dewar (Charlottesville: University Press of Virginia, 1969).

Stock, L.F., (ed.) Proceedings and Debates in the British Parliaments respecting America. Volume 1. 1542-1688(Washington: Carnegie Institute, 1924).

Stone, J.W.M., (ed.) The Inland Posts (1392-1672). A Documentary Calendar of Historical Documents with Appendixes (London: Christie's-Robson Lowe, 1987).

Thirsk, J., & Cooper, J.C., (eds.) Seventeenth Century Economic Documents (Oxford: Clarendon Press, 1972).

Wariston, A., *The Diary of Sir Archibald Johnston of Wariston, Vol. III. 1655-60*, ed. J. Oglivie (Edinburgh: Scottish Historical Society, 1940).

Whitmore, J.B., & Hughes Clarke, A.W., (eds.) "London Visitation Pedigrees 1664", *Harleian Society Publications*, Vol. XCII (1940).

Whitmore, J.B., (ed.) London Will Abstracts, Vol. 13 (London: Society of Genealogists, 1961).

Winstanley, G., The Law of Freedom in a Platform or, True Magistracy Restored, (1652) ed. R.W. Kenny (New York: Schocken Books, 1973).

Winthrop, R.C., (ed.) "Correspondence of Hartlib, Haak, Oldenburg and others of the founders of the Royal Society, with Governor Winthrop of Connecticut, 1661-72", *Proceedings of the Massachusetts Historical Society* (Boston, 1878).

Winthrop, J., "Letters of John Winthrop Jnr 1626-7 – 75-6", Collections of the Massachusetts Historical Society, 5th series, Vol. 8 (Boston, 1882) pp. 3-177.

Worthington, J., *The Diary and Correspondence of Dr. John Worthington*, ed. J. Crossley. Volume 1 (Chetham Society Vol. XIII: Manchester, 1847).

Young, S., (ed.) The Annals of the Barber-Surgeons of London (London: Blades, East & Blades, 1890).

(iv) Secondary Sources: Books.

Andrews, C., The Colonial Period of American History. Volume IV: England's Commercial and Colonial Policy (New Haven: Yale U.P., 1938).

Andrews, K.R., Trade, Plunder and Settlement. Maritime enterprise and the genesis of the British Empire, 1480-1630 (Cambridge: Cambridge U.P., 1984).

Appleby, J., *Economic Thought and Ideology in Seventeenth-Century England* (Princeton: Princeton U.P., 1978).

Armitage, D., & Braddick, M., (eds.) *The British Atlantic World*, 1500-1800 (Basingstoke: Palgrave Macmillan, 2002).

Armitage, D., The Ideological Origins of the British Empire (Cambridge: Cambridge U.P., 2000).

Armytage, F., The Free Port System in the British West Indies. A Study in commercial policy, 1766-1822 (London et. al: Longmans, Green & Co, 1953).

Ashton, R., The City and the Court 1603-1643 (Cambridge: Cambridge U.P., 1979).

Aylmer, G., (ed.) The Interregnum: The Quest for Settlement, 1646-1660 (London: Macmillan, 1972)

----- The State's Servants. The Civil Servants of the English Republic 1649-1660 (London & Boston: Routledge & Kegan Paul, 1973).

------ The Crown's Servants. Government and Civil Service under Charles II, 1660-1685 (Oxford: Oxford U.P., 2002).

Barnard, T., Cromwellian Ireland. English Government and Reform in Ireland 1649-1660. Second edition. (Oxford: Clarendon Press, 2000).

Beer, G., The Old Colonial System, 1660-1754 (New York: Macmillan, 1912).

Black, R.C., *The Younger John Winthrop* (New York & London: Columbia University Press, 1966).

Bliss, R., Revolution and Empire: English Politics and the American Colonies in the Seventeenth Century (Manchester: Manchester U.P., 1990).

••

Boas, M., Robert Boyle and Seventeenth-Century Chemistry (Cambridge: Cambridge U.P., 1948).

Bottigheimer, K., English Money and Irish Land. The 'Adventurers' in the Cromwellian Settlement of Ireland (Oxford: Oxford U.P., 1971).

Braddick, M., State Formation in Early Modern England (Cambridge: Cambridge U.P., 2000).

Brenner, R., Merchants and Revolution. Commercial Change, Political Conflict, and London's Overseas Traders, 1550-1653 (Cambridge: Princeton U.P., 1993).

Bridenbaugh, C., & R., No Peace Beyond the Line. The English in the Caribbean 1624-1690 (New York: Oxford University Press, 1972).

Brown, L.F., The First Earl of Shaftesbury (New York & London: Century Co., 1933).

Canny, N., (ed.) The Oxford History of the British Empire. Vol. 1. The Origins of Empire (Oxford: Oxford U.P., 1998).

----- Making Ireland British 1580-1650 (Oxford: Oxford U.P., 2001).

Capp, B., The Fifth Monarchy Men: A Study in Seventeenth-Century English Millenarianism (London: Faber & Faber, 1972).

Champion, J., The Pillars of Priestcraft Shaken (Cambridge: Cambridge U.P., 1992).

------ Republican Learning. John Toland and the Crisis of Christian Culture, 1696-1722 (Manchester: Manchester U.P., 2003).

Clarke, A., Prelude to Restoration in Ireland. The end of the commonwealth, 1659-60 (Cambridge: Cambridge U.P., 1999).

Clay, C., Economic Expansion and Social Change: England 1500-1700. Volume II. Industry, trade and government (Cambridge: Cambridge U.P., 1984)

Clericuzio, A., Elements, Principles and Corpuscules. A Study of Atomism and Chemistry in the Seventeenth Century (Dordrecht, Boston & London: Kluwer, 2001).

Coffey, J., *Persecution and Toleration in Protestant England*, 1558-1689 (London: Longman, 2000).

Cook, H., *The Decline of the Old Medical Regime in Stuart London* (Ithaca & London: Cornell University Press, 1986).

Craven, W.F., The Southern Colonies in the Seventeenth Century 1607-1689 (Louisiana: Louisiana U.P., 1949).

Curry, P., Prophecy and Power. Astrology in Early Modern England (Cambridge & London: Polity Press, 1989).

Davis, J.C., Utopia and the Ideal Society. A Study of English utopian writing 1516-1700 (Cambridge: Cambridge U.P., 1981).

Debus, A., The Chemical Philosophy. Paracelsan Science and Medicine in the Sixteenth and Seventeenth Centuries (New York: Neale Watson Academic Press, 1977).

Dictionary of National Biography, 64 volumes (London: Smith Elder & Co., 1885-1900).

Edwards, P., Dealing in Death: The Arms Trade and the British Civil Wars (Stroud: Sutton, 2000).

Finkelstein, A., Harmony and the Balance. An Intellectual History of Seventeenth-Century English Economic Thought (Ann Arbor: University of Michigan Press, 2000).

Firth, K., *The Apocalyptic Tradition in Reformation Britain 1530-1643* (Oxford: Oxford U.P., 1979).

Fitzpatrick, B., Seventeenth-Century Ireland: The Wars of Religions (Dublin: Gill & Macmillan, 1988).

Frank, R.G., Harvey and the Oxford Physiologists: a Study of Scientific Ideas and Social Interaction (Berkeley & Los Angeles: University of California Press, 1980).

Gauci, P., The Politics of Trade: The Overseas Merchant in State and Society, 1660-1720 (Oxford: Oxford U.P., 2001).

Goblet, Y.M., La Transformation de la Géographie Politique De l'Irlande au XVIIe Siècle (Paris: Berger-Levrault, 1930).

Goslinga, C., *The Dutch in the Caribbean and on the Wild Coast 1580-1680* (Assen: Van Gorcum & Company, 1971).

Greaves, R.L., Deliver us from Evil. The Radical Underground in Britain, 1660-1663 (New York & Oxford: Oxford U.P., 1986).

----- Enemies Under His Feet. Radicals and Nonconformists in Britain, 1664-1677 (Stanford: Stanford U.P., 1990).

Greaves, R.L., & Zaller, R., (eds.) Biographical Dictionary of British Radicals in the Seventeenth Century, 3 volumes (Brighton: Harvester Press, 1982).

Greene, J.P., Peripheries and Center. Constitutional Development in the Extended Polities of the British Empire and the United State, 1607-1788 (Athens & London: University of Georgia Press, 1986).

Greengrass, M., Leslie, M., & Raylor, T. (eds.) Samuel Hartlib and Universal Reformation (Cambridge: Cambridge U.P., 1994).

Gunn, J.A.W., *Politics and the Public Interest in the Seventeenth Century* (London & Toronto: Routledge, 1969).

Haley, K.H.D., *William of Orange and the English Opposition 1672-4* (Oxford: Clarendon Press, 1953).

----- The First Earl of Shaftesbury (Oxford: Clarendon Press, 1968).

Hall, A.R., Henry More. Magic, Religion and Experiment (Oxford: Blackwell, 1990).

Hancock, D., Citizens of the World. London merchants and the integration of the British Atlantic community, 1735-1785 (Cambridge: Cambridge U.P., 1995).

Harper, L.A., The English Navigation Laws. A Seventeenth-Century Experiment in Social Engineering (New York: Columbia U.P., 1939).

Harris, F.R., Edward Montagu 1st Earl of Sandwich (1625-1672), Vol. II (London: John Murray, 1912).

Harris, T., Seaward, P., & Goldie, M., (eds.) The Politics of Religion in Restoration England (Oxford: Blackwell, 1990).

Hill, C., The Century of Revolution 1603-1714, 2nd edition (London: Routledge, 1980).

Hinton, R.W.K., The Eastland Trade and the Common Weal in the Seventeenth Century (Cambridge: Cambridge U.P., 1959)

Horsefield, J.K., British Monetary Experiments 1650-1710 (London: G. Bell & Sons, 1960).

Hotson, H., Johann Heinrich Alsted 1588-1638. Between Renaissance, Reformation, and Universal Reform (Clarendon Press: Oxford, 2000).

Houston, A., & Pincus, S., (eds.) A Nation Transformed. England After the Restoration (Cambridge: Cambridge U.P., 2001).

Howell, R., *Newcastle Upon Tyne and the Puritan Revolution* (Oxford: Clarendon Press, 1967).

Hughes, A., The Causes of the English Civil War (Basingstoke & London: Macmillan, 1991).

Hunter, M., Science and Society in Restoration England (Cambridge: Cambridge U.P., 1981).

------ Establishing the New Science. The Experience of the Early Royal Society (Woodbridge: Boydell Press, 1989).

------ (ed.) Robert Boyle Reconsidered (Cambridge: Cambridge U.P., 1994).

------ Science and the Shape of Orthodoxy. Intellectual Change in Late Seventeenth-Century Britain (Woodbridge: Boydell Press, 1995).

----- Robert Boyle 1627-1691. Scrupulosity and Science (Woodbridge: Boydell Press, 2000).

Hutton, R., The Restoration. A Political and Religious History of England and Wales 1658-1667 (Oxford: Oxford U.P., 1985).

Israel, J., Dutch Primacy in World Trade, 1585-1740 (Oxford: Clarendon Press, 1989).

----- Radical Enlightenment. Philosophy and the Making of Modernity 1650-1750 (Oxford: Oxford U.P., 2001)

Jacob, J.R., Robert Boyle and the English Revolution. A Study in Social and Intellectual Change (New York: Burt Franklin & Co., 1977).

James, M., Social Problems and Policy During the Puritan Revolution (London: Routledge, 1930).

Jones, J.R., *The Anglo-Dutch Wars of the Seventeenth Century* (London & New York: Longman, 1996).

Jordan, W.K., Men of Substance. A Study of the Thought of Two English Revolutionaries (Chicago & Illinois: University of Chicago Press, 1942).

Keil, I., Augustanus Opticus. Johann Wiesel (1583-1662) und 200 Jahre optisches Handwerk in Augsburg (Berlin: Akademie Verlag, 2000).

Kelsey, S., Inventing a Republic. The Political Culture of the English Commonwealth 1649-1653 (Manchester: Manchester U.P., 1997).

Kepler, J.S., The Exchange of Christendome. The international entrepôt at Dover 1622-1651 (Leicester: Leicester UP, 1976).

Kitchin, G., Sir Roger L'Estrange (London: Kegan Paul, 1913).

Knights, M., Politics and Opinion in Crisis, 1678-81 (Cambridge: Cambridge U.P., 1994).

Lamont, W., Godly Rule. Politics and Religion 1603-60 (London: Macmillan, 1969).

Letwin, W., The Origins of Scientific Economics: English Economic Though, 1660-1776 (London: Methuen & Co, 1963)

Loades, D., England's Maritime Empire. Seapower, Commerce and Policy 1490-1690 (Longman: Harlow, 2000).

Macpherson, C.B., *The Political Theory of Possessive Individualism* (Oxford: Clarendon Press, 1962).

Maddison, R.E.W., *The Life of the Honourable Robert Boyle FRS* (London: Taylor & Francis Ltd, 1969).

Marshall, J., John Locke. Resistance, Religion and Responsibility (Cambridge: Cambridge U.P., 1994).

McLachlan, H.J., Socinianism in Seventeenth-Century England (Oxford: Oxford U.P., 1951).

Miller, J., Charles II (London: Weidenfeld & Nicolson, 1991).

Muldrew, C., The Economy of Obligation: The Culture of Credit and Social Relations in Early Modern Europe (London & Hampshire: Macmillan, 1998).

Newman, W., Gehennical Fire. The Lives of George Starkey, an American Alchemist in the Scientific Revolution (Cambridge: Harvard U.P., 1994).

Newman, W., & Principe, L., Alchemy Tried in the Fire. Starkey, Boyle, and the Fate of Helmontian Chymistry (Chicago & London: The University of Chicago Press, 2002).

O'Hart, J., The Irish and Anglo-Irish Landed Gentry (Dublin: Irish U.P., 1969).

Ohlymer, J., (ed.) Ireland From Independence to Occupation 1641-1660 (Cambridge: Cambridge U.P., 1995).

Olby, R., Cantor, G., Christie, J., & Hodge, M., (eds.) Companion to the History of Modern Science (London & New York: Routledge, 1990).

Ormrod, D., The Rise of Commercial Empires. England and the Netherlands in the Age of Mercantilism, 1650-1770 (Cambridge: Cambridge U.P., 2003).

Osler, M., Divine Will and the Mechanical Philosophy. Gassendi and Descartes on contingency and necessity in the created world (Cambridge: Cambridge U.P., 1994).

Pincus, S., Protestantism and Patriotism: Ideologies and the making of English foreign policy, 1650-1668 (Cambridge: Cambridge U.P., 1996).

Popkin, R., The History of Scepticism from Erasmus to Spinoza (Berkeley, Los Angeles & London: University of California Press, 1979).

----- The Third Force in Seventeenth-Century Thought (Leiden: E.J. Brill, 1992).

Principe, L., *The Aspiring Adept. Robert Boyle and his Alchemical Quest* (Princeton: Princeton U.P., 1998).

Raylor, T., & Leslie, M., (eds.) Culture and Cultivation in Early Modern England: Writing and the Land (Leicester: Leicester U.P., 1992).

Sacks, D.H., *The Widening Gate. Bristol and the Atlantic Economy, 1450-1700* (Berkeley, Los Angeles, & London: University of California Press, 1991).

Sainty, J.C., Office Holders in Modern Britain. Vol. III. Officials of the Board of Trade 1660-1870 (London: Athlone Press, 1974).

Sargent, R-M., The Diffident Naturalist. Robert Boyle and the Philosophy of Experiment (Chicago & London: University of Chicago Press, 1995).

Scott, J., Algernon Sidney and the English Republic, 1623-1677 (Cambridge: Cambridge U.P., 1988).

----- Algernon Sidney and the Restoration Crisis, 1677-1683 (Cambridge: Cambridge U.P., 1991).

------ England's Troubles. Seventeenth-Century Political Instability in European Context (Cambridge: Cambridge U.P., 2000).

Scott, W.R., The Constitution and Finance of English, Scottish and Irish Joint-Stock Companies to 1720, Vol. II (Cambridge: Cambridge U.P., 1910).

Shapin, S., A Social History of Truth. Civility and Science in Seventeenth-Century England (Chicago & London: University of Chicago Press, 1994).

Shapiro, B., *Probability and Certainty in Seventeenth-Century England* (Princeton: Princeton U.P., 1983).

Slack, P., From Reformation to Improvement. Public Welfare in Early Modern England (Oxford: Clarendon Press, 1999).

Smith, N., Perfection Proclaimed: Language and Literature in English Radical Religion 1640-1660 (Oxford: Clarendon Press, 1989).

Sosin, J.M., English American and the Restoration Monarchy of Charles II (Lincoln & London: University of Nebraska Press, 1980).

Spurr, J., The Restoration Church of England, 1646-1689 (New Haven & London: Yale U.P., 1991).

----- English Puritanism 1603-1689 (London & Basingstoke: Macmillan, 1998).

----- England in the 1670's (Oxford: Blackwell, 2000).

Steele, I., Politics of Colonial Policy. The Board of Trade in Colonial Administration 1696-1720 (Oxford: Clarendon Press, 1968).

Stewart, R.W., The English Ordnance Office. A Case-Study in Bureaucracy (Woodbridge: Boydell Press, 1996).

Strauss, E., Sir William Petty. Portrait of a Genius (London: Bodley Head, 1954).

Supple, B., Commercial Crisis and Change in England 1600-1642. A Study in the Instability of a Mercantile Economy (Cambridge: Cambridge U.P., 1959).

Thorndike, L., A History of Magic and Experimental Science. Vol. VIII: The Seventeenth Century (New York: Columbia U.P., 1958).

Thornton, A.P., *West-India Policy under the Restoration* (Oxford: Clarendon Press, 1956).

Thirsk, J., Economic Policy and Projects. The Development of a Consumer Society in Early Modern England (Oxford: Clarendon Press, 1978).

Tuck, R., Philosophy and Government, 1572-1651 (Cambridge: Cambridge U.P., 1993).

Turnbull, G., Hartlib, Dury and Comenius. Gleanings from Hartlib's Papers (London: Hodder & Stoughton, 1947).

Wear, W., Knowledge and Practice in English Medicine, 1550-1680 (Cambridge: Cambridge U.P., 2000).

Webster, C., (ed.) The Intellectual Revolution of the Seventeenth Century (London & Boston: Routledge & Kegan Paul, 1974).

------ The Great Instauration. Science, Medicine and Reform 1626-1660. (London: Duckworth, 1975). Second edition (Oxford: Peter Lang, 2002).

------ (ed.) Health, Medicine and Mortality in the Sixteenth Century (Cambridge: Cambridge U.P., 1979).

----- From Paracelsus to Newton. Magic and the Making of Modern Science (Cambridge: Cambridge U.P., 1982).

White, S., Sir Edward Coke and the Grievances of the Commonwealth (Manchester: Manchester U.P., 1979).

Williamson, J.A., English Colonies in Guiana and on the Amazon, 1604-1668 (Oxford: Clarendon Press, 1923).

Wilson, C., *Profit and Power. A Study of England and the Dutch Wars*, 2nd edition (The Hague: Martinus Nijhoff, 1978).

----- England's Apprenticeship 1603-1763, 2nd edition (London: Longman, 1984).

Wood, N., Foundations of Political Economy. Some early views on state and society (London & Berkeley: University of California Press, 1994).

Worden, B., The Rump Parliament 1648-1653 (Cambridge: Cambridge UP: 1974).

Woolrych, A., Britain in Revolution 1625-1660 (Oxford: Oxford U.P., 2002).

Wrightson, K., Earthly Necessities. Economic Lives in Early Modern Britain, 1470-1750 (London: Penguin, 2002)

Yates, F., The Rosicrucian Enlightenment (London & New York: Routledge, 1972).

Young, J.T., Faith, Medical Alchemy and Natural Astrology. Johann Moriaen, Reformed Intelligencer, and the Hartlib circle (Aldershot: Ashgate, 1998).

(v) Secondary Sources: Articles.

Andrews, C., "British Committees, Commissions, and Councils of Trade and Plantations, 1622-1675", *John Hopkins University Studies in Historical and Political Science*, Series XXVI, Nos. 1-2-3 (Baltimore: John Hopkins Press, 1908) pp. 1-116.

Ashton, R., "The Parliamentary Agitation for Free Trade in the Opening Years of the Reign of James I", *Past and Present*, 37 (1967) pp. 40-55.

Baldwin, G., "The 'public' as a rhetorical community in early modern England", in *Communities in early modern England. Networks, place, rhetoric*, ed. A. Shepard & P. Withington (Manchester & New York: Manchester U.P., 2000) pp. 199-215.

Barbour, V., "Dutch and English Merchant Shipping in the Seventeenth Century", *Economic History Review*, Vol. 2, No. 2 (Jan. 1930) pp. 261-290.

Barnard, T., "Planters and Policies in Cromwellian Ireland", *Past and Present*, 61 (1973) pp. 31-69.

------ "Lord Broghill, Vincent Gookin and the Cork elections of 1659", *The English Historical Review*, Vol. 88, No. 347 (Apr., 1973) pp. 352-365.

----- "The Hartlib circle and the origins of the Dublin Philosophical Society", *Irish Historical Studies*, Vol. XIX (1974-5) pp. 56-71.

----- "The Hartlib circle and the cult and culture of improvement in Ireland" in *Samuel Hartlib and Universal Reformation*, ed. Greengrass, Rayler and Leslie, pp. 281-297.

Bieber, R.P., "The British Plantation Councils of 1670-4", *English Historical Review*, XL (1925) pp. 93-106.

Braddick, M., "Government, War, Trade, and Settlement", in *The Oxford History of the British Empire. Vol. 1. The Origins of Empire*, ed. Canny, pp. 286-308.

------ "Civility and Authority", in *The British Atlantic World*, 1500-1800, ed. Armitage & Braddick, pp. 93-112.

Braddick, M., & Greengrass, M., "Introduction" to "The Letters of Sir Cheney Culpeper (1641-1657)", ed. M. Braddick & M. Greengrass. *Camden Miscellany*, XXXIII, Fifth Series, Volume 7 (Cambridge: Cambridge U.P., 1996) pp.115-150.

Brenner, R., "The Civil War Politics of London's Merchant Community", Past and Present, No. 58 (February 1973) pp. 53-107

Buck, P., "Seventeenth-Century Political Arithmetic: Civil Strife and Vital Statistics", *Isis*, Vol. 68 (1977) pp. 67-84.

Butterfield, K., "Puritans and Religious Strife in the Early Chesapeake", Virginia Magazine of History and Biography, Vol. 109, No. 1 (2001) pp. 5-36.

Ĉapková, D., "The Comenian Group in England and Comenius' Ideal of Universal Reform", Acta Comeniana, 1 (1970) pp. 25-34.

------ "Comenius and his ideals: escape from the labyrinth", in Samuel Hartlib and Universal Reformation, ed. Greengrass, Leslie & Raylor, pp. 75-91.

Champion, J., "Legislators, impostors, and the politic origins of religion: English theories of 'imposture' from Stubbe to Toland", in *Heterodoxy, Spinozism, and Free Thought in Early-Eighteenth Century Europe*, ed. S. Berti, F. Charles-Daubert, R. Popkin (Klower: Dordrecht, Boston & London, 1996) pp. 333-356.

Clericuzio, A., "A Redefinition of Boyle's Chemistry and Corpuscular Philosophy", Annals of Science, 47 (1990) pp. 561-589.

------ "New light on Benjamin Worsley's natural philosophy", in Samuel Hartlib and Universal Reformation, ed. Greengrass, Leslie, & Raylor, pp. 236-246.

Clucas, S., "The Correspondence of a XVII-Century 'Chymicall Gentleman': Sir Cheney Culpeper and the Chemical Interests of the Hartlib Circle", *Ambix*, Vol. 40, Part 3 (1993) pp. 147-170.

Conquest, R., "The State and Commercial Expansion: England in the Years 1642-1688", *Journal of European Economic History*, 14, No. 1 (1985) pp. 155-172.

Cooper, J.P., "Economic Regulation and the Cloth Industry in Seventeenth-Century England", *Transactions of the Royal Historical Society*, 5th series, no. 20 (1970) pp. 73-99.

------ "Social and Economic Policies Under the Commonwealth", in *The Interregnun*, ed. Aylmer, pp. 121-142.

Corfield, P., "Economic Issues and Ideologies", in *The Origins of the English Civil War*, ed. C. Russell (London & Basingstoke: Macmillan, 1973) pp. 197-218.

Coughlan, P., "Natural history and historical nature: the project for a natural history of Ireland", in *Samuel Hartlib and Universal Reformation*, ed. Greengrass, Rayler and Leslie, pp. 298-317.

Cramsie, J., "Commercial Projects and the Fiscal Policy of James VI and I", *Historical Journal*, 43, 2 (2000) pp. 345-364.

Cunningham, A., "Thomas Sydenham: Epidemics, experiment and the 'Good Old Cause", in *The Medical Revolution of the Seventeenth-Century*, ed. R. French & A. Wcar (Cambridge: Cambridge U.P., 1989) pp. 164-190.

Davis, J.C., "Against Formality: One Aspect of the Puritan Revolution", *Transactions* of the Royal Historical Society, 6th scries, 3 (1993) pp. 265-288.

Davis, R., "English Foreign Trade, 1660-1700", in *The Growth of English Trade in the* Seventeenth and Eighteenth Centuries, ed. W.E. Minchington (London: Methuen, 1969) pp. 78-98.

Debus, A., "The Paracelsian Aerial Nitre", in *Man, Nature and the Renaissance* (Cambridge: Cambridge U.P., 1978) pp. 44-61.

De Krey, G., "The First Restoration Crisis: Conscience and Coercion in London, 1667-1673", *Albion*, 25, 4 (Winter 1993) pp. 565-580.

------ "Rethinking the Restoration: Dissenting Cases for Conscience, 1667-1672", *Historical Journal*, 38, 1 (1995) pp. 53-83.

Durston, C., "Puritan Rule and the Failure of Cultural Revolution, 1645-1660", in *The Culture of English Puritanism*, 1560-1700, ed. C. Durston & J. Eales (London & Basingstoke: Macmillan, 1996) pp. 210-233.

Farnell, J.E., "The Navigation Act of 1651, the First Dutch War, and the London Merchant Community", *Economic History Review*, 2nd series, Vol. 16, No. 3 (1963-4) pp. 439-454.

Gabbey, A., "Newton and Natural Philosophy", in *The Compendium to the History of Modern Science*, ed. Olby et. al. pp. 256-62.

Garber, D., 'Soul and Mind: Life and Thought in the Seventeenth Century', in *The Cambridge History of Seventeenth-Century Philosophy*, Volume 1, ed. D. Garber and M. Ayers (Cambridge: Cambridge UP, 1998) pp. 759-793.

Goldie, M., "The Civil Religion of James Harrington", in *The Languages of Political Theory in Early-Modern Europe*, ed. A. Pagden (Cambridge: Cambridge U.P., 1987) pp. 197-222.

------ "Danby, the Bishops and the Whigs", in *The Politics of Religion in Restoration England*, ed. T. Harris, P. Seaward, & M. Goldie (Oxford: Oxford U.P., 1990) pp. 75-105.

------ "John Locke's Circle and James II", *Historical Journal*, 35, 3 (1992) pp. 557-586.

------ "Priestcraft and the Birth of Whiggism", in *Political Discourse in Early* Modern Britain, ed. N. Phillipson & Q. Skinner (Cambridge: Cambridge U.P., 1993) pp. 209-231.

Greengrass, M., "Samuel Hartlib and International Calvinism", Proceedings of the Huguenot Society XXV, 5 (1993) pp. 464-474.

Greengrass, M., Leslie, M., & Raylor, T., "Introduction" to Samuel Hartlib and Universal Reformation, ed. M. Greengrass, M. Leslie, & T. Raylor (Cambridge: Cambridge U.P., 1994) pp. 1-19.

Groenveld, S., "The English Civil Wars as a Cause of the First Anglo-Dutch War, 1640-1652", *Historical Journal*, 30, 3 (1987) pp. 541-566.

Hardinge, W.H., "On Manuscript Mapped and other Towdland Surveys in Ireland of a Public Character, embracing the Gross, Civil, and Down Surveys, from 1640 to 1688', *Transactions of the Royal Irish Academy: Antiquities*, 24 (1873) pp. 1-118.

•••

Henry, J., "Boyle and cosmical qualities", in *Robert Boyle Reconsidered*, ed. M. Hunter (Cambridge: Cambridge U.P., 1994) pp. 119-138.

------ "Magic and Science in The Sixteenth and Seventeenth Centuries", in *The Compendium to the History of Modern Science*, ed. Olby et. al. pp. 583-596.

Hirst, D., "The Failure of Godly Rule in the English Republic", *Past and Present*, 132 (1991) pp. 33-66.

Houston, A., "A Way of Settlement': The Levellers, Monopolies, and the Public Interest", *History of Political Thought*, Vol. XIV, No. 3 (Autumn 1993) pp. 381-420.

----- "Republicanism, the politics of necessity, and the rule of law", in *A Nation Transformed. England After the Restoration*, ed. Houston & Pincus, pp. 241-271.

Hoxby, B., "The Government of Trade: Commerce, Politics, and the Courtly Art of the Restoration", *English Literary History*, Vol. 66, No. 3 (1999) pp. 591-627.

Hunter, M., "How Boyle Became a Scientist", in *Robert Boyle 1627-1691: Scrupulosity* and Science (Woodbridge: Boydell, 2000) pp. 15-57.

Iliffe, R., "Jesus Nazarenus legislator': Adam Boreel's defence of Christianity", in *Heterodoxy, Spinozism, and Free Though in Early-Eighteenth-Century Europe*, ed. S. Berti, F. Charles-Daubert, R. Popkin (Klower: Dordrecht, Boston & London, 1996) pp. 375-396.

Israel, J., "England's Mercantilist Response to Dutch World Trade Primacy, 1647-1674", in *State and Trade. Government and the Economy in Britain and the Netherlands Since the Middle Ages*, ed. S. Groenveld & M. Wintle (Zutphen: Walburg Press, 1992) pp. 50-61.

James, S.R., "A List of Surgeons in Practice in London and its Suburbs in 1641", Bulletin of the History of Medicine, 19 (1946) pp. 282-290.

Kaplan, B., "Greatrakes the Stroker: The Interpretations of His Contemporaries", *Isis*, Vol. 73, No. 2 (June 1982) pp. 178-185.

Keil, I., "Technology Transfer and scientific specialization: Johann Wiesel, Optician of Augsburg, and the Hartlib circle", in *Samuel Hartlib and Universal Reformation*, ed. Greengrass, Rayler & Leslie, pp. 268-278.

Keirn, T., & Melton, F., "Thomas Manley and the Rate-of-Interest Debate, 1668-1673", Journal of British Studies, 29 (April 1990) pp. 147-173.

Kelly, P.H., "Introduction" to *Locke on Money*, ed. P.H. Kelly (Oxford: Clarendon Press, 1991) pp. 1-109.

Kilroy, P., "Radical Religion in Ireland", in *Ireland From Independence to Occupation*, ed. J. Ohlmeyer, pp. 201-217.

Knights, M., "Meer religion' and the 'church-state' of Restoration England: the impact and ideology of James II's declarations of indulgence", in *A Nation Transformed*, ed. Houston & Pincus, pp. 41-70.

Kukla, J., "Order and Chaos in Early America: Political and Social Stability in Pre-Restoration Virginia", *American Historical* Review, Vol. 90, No. 2 (April 1985) pp. 275-298.

Lake, P., "Anti-Popery: the Structure of a Prejudice", in *The English Civil War*, ed. R. Cust & A., Hughes (London: Arnold, 1997) pp. 181-210.

Laslett, P., "John Locke, the Great Recoinage, and the Origins of the Board of Trade: 1695-1698", *William and Mary Quarterly*, 3rd series, Vol. XIV, No. 3 (July 1957) pp. 368-402.

Leslie, M., "The Spiritual Husbandry of John Beale", in *Culture and Cultivation*, ed. Leslie & Rayler, pp. 151-172.

Maddison, R.E.W., "Studies in the Life of Robert Boyle, F.R.S. Part VI. The Stalbridge Period, 1645-1655, and the Invisible College", *Notes and Records of the Royal Society*, Vol. 18, No. 2 (1963) pp. 104-124.

Manke, E., "Empire and State", in *The British Atlantic World*, 1500-1800, ed. Armitage & Braddick, pp. 175-195.

Marshall, A., "Colonel Thomas Blood and the Restoration Political Scene", *Historical Journal*, 32, 3 (1989) pp. 561-582.

------ "Sir Joseph Williamson and the Conduct of Administration in Restoration England", *Historical Research*, 69, 168 (1996) pp. 18-41.

Mayers, R., "Real and Practicable, not Imaginary and Notional: Sir Henry Vane, *A Healing Question*, and the Problems of the Protectorate", *Albion*, 27, 4 (1995) pp. 37-72.

Milton, A., "The Unchanged Peacemaker'? John Dury and the politics of irenicism in England, 1628-1643", in *Samuel Hartlib and Universal Reformation*, ed. Greengrass, Leslie, & Raylor, pp. 95-117.

Morrill, J., "Conflict Probable or Inevitable?" (review of Merchants and Revolution), New Left Review, 207 (Sept/Oct 1994) pp. 113-123.

Newell, M., "Robert Child and the Entrepreneurial Vision: Economy and Ideology in Early New England", *The New England Quarterly*, Vol. LXVIII, No. 2 (June 1995) pp. 223-256.

Newman, W., "Newton's Clavis as Starkey's Key", Isis, 78 (1987) pp. 564-573.

Pagden, A., "The Struggle for Legitimacy and the Image of Empire in the Atlantic to c.1700", in *The Oxford History of the British Empire, Vol. 1. The Origins of Empire*, ed. N. Canny, pp. 42-47.

Parnham, D., "Politics Spun out of Theology and Prophecy: Sir Henry Vane on the Spiritual Environment of Public Power", *History of Political Thought*, Vol. XXII, 1 (2001) pp. 53-83.

Peacey, J., "Order and Disorder in Europe: Parliamentary Agents and Royalist Thugs 1649-1650", *Historical Journal*, 40, 4 (1997) pp. 953-976.

Pelling, M., "Appearance and reality: barber-surgeons, the body and disease", in *The Making of the Metropolis. London 1500-1700*, ed. A.L. Beier & R. Finlay (London & New York: Longman, 1986) pp. 82-112.

Pelling, M., & Webster, C., "Medical Practitioners", in *Health, Medicine and Mortality* in the Sixteenth Century, ed. Webster, pp. 165-235.

Pincus, S., "Coffee Politicians Does Create": Coffeehouses and Restoration Political Culture", *The Journal of Modern History*, 67 (December 1995) pp. 807-34

------ "From Butterboxes to Wooden Shoes: the Shift in English Popular Sentiment from Anti-Dutch to Anti-French in the 1670s", *Historical Journal*, 39, 2 (1995) pp. 333-361.

------ "Neither Machiavellian Moment not Possessive Individualism: Commercial Society and the Defenders of the English Commonwealth", *American Historical Review*, Vol. 103, No. 3 (June 1998) pp. 705-736.

------ "From holy cause to economic interest: the study of population and the invention of the state", *A Nation Transformed*, ed. Pincus & Houston, pp. 272-98.

Popkin, R., "Hartlib, Dury and the Jews", in *Samuel Hartlib and Universal Reformation*, ed. Greengrass, Rayler & Leslie, pp. 118-136.

Principe, L., & Newman, W., "Some Problems with the Historiography of Alchemy", in *Secrets of Nature: Astrology and Alchemy in Early Modern Europe*, ed. W. Newman & A. Grafton (Cambridge, Mass: MIT Press, 2001) pp. 385-431.

Ramsey, P., "The Tudor State and Economic Problems", in *State and Trade. Government and the Economy in Britain and the Netherlands Since the Middle Ages*, ed. S. Groncveld & M. Wimthe (Zutphen: Walburg Press, 1992) pp. 28-38.

Raylor, T., "Samuel Hartlib and the Commonwealth of Bees", in *Culture and Cultivation in Early Modern England*, ed. Raylor & Leslie, pp. 91-129.

Rich, E.E., "The First Earl of Shaftesbury's Colonial Policy", *Transactions of the Royal Historical Society*, 5th series, Vol. VII (1957) pp. 47-70.

Roots, I., "Cromwell's Ordinances: The Early Legislation of the Protectorate", in *The Interregnum*, ed. Aylmer, pp. 143-164.

Sacks, D.H., "Parliament, Liberty, and the Commonweal", in *Parliament and Liberty* from the Reign of Elizabeth to the English Civil War, ed. J.H. Hexter (Stanford: Stanford U.P., 1992), pp. 85-121.

------ "The countervailing of benefits: monopoly, liberty, and benevolence in Elizabethan England", in *Tudor Political Culture*. ed. D. Hoak (Cambridge: Cambridge U.P., 1995) pp. 272-91.

Schuster, J., "The Scientific Revolution", in Companion to the History of Modern Science, ed. Olby et. al., pp. 217-240.

Scott, J., "Good Night Amsterdam'. Sir George Downing and Anglo-Dutch Statebuilding", *English Historical Review*, cxviii, 476 (April 2003) pp. 334-356.

------ "England's Troubles: Exhuming the Popish Plot", in *The Politics of Religion in Restoration England*, ed. Harris, Goldie, & Seaward, pp. 197-132.

Seaward, P., "The House of Commons Committee of Trade and the Origins of the Second Anglo-Dutch War, 1664", *Historical Journal*, 30, 2 (1987) pp. 437-452.

Shammas, C., "English commercial development and American colonization 1560-1620", in *The Westward Enterprise. English activities in Ireland, the Atlantic, and America 1480-1650*, ed. K. Andrews, N. Canny, P. Hair (Detroit: Wayne State U.P., 1979) pp. 151-174.

Shapiro, B., "Latitudinarianism and Science in Seventeenth-Century England", in *The Intellectual Revolution of the Seventeenth Century*, ed. Webster, pp. 286-316.

Shirren, A., ""Colonel Zanchy" and Charles Fleetwood", *Notes and Queries*, Vol. CXCVIII (Jan.-Dec. 1653) pp. 431-5, 474-7, 519-24.

Simmington, R., "Introduction" to 'The Civil Survey AD 1654-56', Vol. 1. (Dublin: Irish MSS Commission, 1931) pp. iii-x.

Simms, J.G., "The Civil Survey, 1654-6", Irish Historical Studies, Vol. IX. No. 35 (March 1955) pp. 253-263.

Smith, N., "Exporting Enthusiasm: John Perrot and the Quaker epic", in *Literature and the English Civil War*, ed. T. Healy & J. Sawday (Cambridge: Cambridge U.P., 1990) pp. 248-264.

Speck, W., "Britain and the Dutch Republic", in *A Miracle Mirrored. The Dutch republic in European perspective*, ed. K. Davids & J. Lucassen (Cambridge: Cambridge U.P., 1995) pp. 173-195.

Steneck, N., "Greatrakes the Stroker: The Interpretations of Historians", *Isis*, Vol. 73, No. 2 (June 1982) pp. 160-177.

Stubbs, M., "John Beale, Philosophical Gardener of Herefordshire", Annals of Science, 39 (1982) pp. 463-489 (part 1); 46 (1989) pp. 323-363 (part 2).

Thirsk, J., "The Crown as Projector on its own estates, from Elizabeth I to Charles I", in *The Estates of the English Crown 1558-1640*, ed. R.W. Hoyle (Cambridge: Cambridge U.P., 1992) pp. 297-352.

Trevor-Roper, H., "Three Foreigners: The Philosophers of the Puritan Revolution", in *Religion, The Reformation and Social Change* (London: Macmillan, 1967) pp. 237-293.

Webb, S.S., "William Blathwayt, Imperial Fixer: From Popish Plot to Glorious Revolution", *William and Mary Quarterly*, 3rd series, Vol. 25, No. 4 (October 1968) pp. 1-21.

Webster, C., "Water as the Ultimate Principle of Nature: The Background to Boyle's Sceptical Chymist", *Ambix*, Vol. XIII, No. 2 (June 1966) pp. 96-107.

------ "English Medical Reformers of the Puritan Revolution: A Background to the "Society of Chymical Physicians", *Ambix*, Vol. XIV (1967) pp. 16-42.

------ "The Authorship and Significance of Macaria", *Past and Present*, no. 56 (1972) pp. 34-48.

------ "Introduction" to *The Intellectual Revolution of the Seventeenth Century*, ed. Webster, pp. 1-22.

------ "New Light on the Invisible College: The Social Relations of English Science in the Mid-Seventeenth Century", *Transactions of the Royal Historical Society*, 24 (1974) pp. 19-42.

----- "Alchemical and Paracelsan Medicine", in *Health, Medicine and Mortality*, ed. Webster, pp. 301-334.

------ "Benjamin Worsley: engineering for universal reform from the Invisible College to the Navigation Act", in *Samuel Hartlib and Universal Reformation*, ed. Greengrass, Leslie & Rayler, pp. 213-233.

Wheeler, S., "Four Armies in Ireland", in *Ireland from Independence to Occupation*, 1641-1660, ed. Ohlmeyer, pp. 43-65.

Whitmore, J.P., "Dr. Worsley being Dead", Notes and Queries (August 28th 1943) pp. 123-128.

Williams, A.R., "The Production of Saltpetre in the Middle Ages", *Ambix*, Vol. 22, Part 2 (July 1975) pp. 125-133.

Worden, B., "Classical Republicanism and the Puritan Revolution", in *History and Imagination. Essays in Honour of H.R. Trevor-Roper*, ed. H. Lloyd-Jones, V. Pearl, & B. Worden (London: Duckworth, 1981) pp. 182-200.

------ "Toleration and the Cromwellian Protectorate", in *Studies in Church History 21. Toleration and Persecution*, ed. W.J. Sheils (Oxford: Blackwell, 1984) pp. 199-233.

----- "The question of secularization", in *A Nation Transformed*, ed. Houston & Pincus, pp. 20-40.

Wootton, D., "Introduction: The Republican Tradition: From Commonwealth to Common Sense", in *Republicanism, Liberty, and Commercial Society, 1649-1776*, ed. D. Wootton (Stanford: Stanford U.P., 1994) pp. 1-41.

Yeomans, D., "The Origin of North American Astronomy--Seventeenth Century", *Isis*, Vol. 68, No. 3. (Sept. 1977) pp. 414-425.

Zahedieh, N., "The Merchants of Port Royal, Jamaica, and the Spanish Contraband Trade, 1655-1692", *William and Mary Quarterly*, 3rd series, Vol. XLIII, No. 4 (Oct. 1986) pp. 570-593.

------ "Trade, Plunder, and Economic Development in Early English Jamaica, 1655-89", *Economic History Review*, 2nd series, XXXIX, 2 (1986) pp. 205-222.

------ " 'A Frugal, Prudential and Hopeful Trade'. Privateering in Jamaica, 1655-89", Journal of Imperial and Commonwealth History, 18, 2 (1990) pp. 145-168.

------ "London and the colonial consumer in the late seventeenth century", *Economic History Review*, XLVII, 2 (1994) pp. 239-261.

------ "Overseas Expansion and Trade in the Seventeenth Century", in *The Oxford History of the British Empire. Vol. 1: The Origins of Empire*, ed. Canny, pp. 398-422.

------ "Making Mercantilism Work: London Merchants and Atlantic Trade in the Seventeenth Century", *Transactions of the Royal Historical Society*, 6th series, IX (1999) pp. 143-158.

----- "Economy", in *The British Atlantic World*, 1500-1800, ed. Armitage & Braddick, pp. 51-68.

Zell, M., "Walter Morrell and the New Draperies Project, c.1603-1631", *Historical Journal*, 44, 3 (2001) pp. 651-675.

(vi) Unpublished secondary sources.

Man, Y., 'English colonization and the formation of Anglo-American polities, 1606-1664', unpublished PhD dissertation (The John Hopkins University, 1994).

Sharp, L., 'Sir William Petty and some aspects of Seventeenth-Century Natural Philosophy', unpublished DPhil thesis (Oxford, 1977).