11

The Scientification of Money

11.1 The Science of Interest

The common understanding of money underwent change during the seventeenth century in tandem with changes in the conception of nature within corpuscularianism. Chapter 10 discussed key theoretical experiments made in order to separate money from its metallic constitution, such as William Potter's *The Key of Wealth*. This chapter analyses the theoretical transformation of money into a necessary element, inter alia, of the economic process. Specifically, when money became a necessity, it disappeared from the radar of moral natural law and theology though not from that of philosophy and studies of trade. Money underwent a process of 'scientification', for the systematic knowledge that Locke produced 'in the spirit of "truth-seeking" science' about how money works in the economy, became the new and primary source of legitimisation.[1] Not only was money placed outside theology and moral philosophy, but as a necessity, money operated now outside the sphere of deliberation of practical reason devoted to contingents. Considered as an indispensable element of the system of trade (the economic system), it became the object of study of the emergent branch of political economy, whose avowed aim was a type of imitation of nature. Significantly, William Petty's advice with regard to macroeconomic measures looked to adopt the 'more natural way', rather than the 'resisting of Nature'. For instance, if food could be produced much cheaper in England than in Holland, the natural way forward would be 'to take away burthensome, frivolous, and antiquated Impositions and Offices' (taxes). In the case of trade, if the Dutch had outdone the English

[1] Weingart who studied some years ago the process in the context of the politics of new knowledge production writes that '"scientification" is a process whereby the use of and claim to systematic and certified knowledge produced in the spirit of "truth-seeking" science becomes the chief legitimating source for activity in virtually all other functional subsystems', Weingart, 'From Finalization to Mode 2': Old Wine in New Bottles?', p. 610.

in the manufacture of cloth 'by more art', a good course would be for example to send people to Holland to learn from Dutch methods.

> We must consider in general, that as wiser Physicians tamper not excessively with their Patients, rather observing and complying with the motions of nature, then (*sic*) contradicting it with vehement Administrations of their own; so in Politicks and Oconomicks the same must be used.[2]

Locke may be set apart from the scholars and merchants writing on usury mentioned in the previous chapter. No reference was made in his remarkable piece, *Some of the Consequence that are Like to Follow Upon Lessening of Interest to 4 per Cent* (1668) to Josiah Child's statement about the 'multiplying Nature' of interest which 'make the Lenders monstrous rich' and the rest extremely poor.[3] His discussion did not deal with usury, richness, wealth, prosperity or desire, but with scarcity, necessity and needs. With razor-sharp thinking and armed with the rhetorical tools to rebuff critique concerning unlawful usury, the depravity of greed and the scandalous iniquity of wealth, he eliminated all elements from the phenomenon of 'money' that would be unsuitable in a discourse of natural philosophy. Carl Wennerlind has recently described the renewed enthusiasm about the 'achievement' of money among Enlightenment philosophers.[4] My argument is that Locke's purification of money of its theological and philosophical past, which he carried out by means of scientific analysis, was instrumental in that enlightened appraisal of money.

This chapter introduces William Potter's proposals to ensure the quality of Irish money and compares it with Locke's position. It contains detailed analysis of Locke's understanding of money as a necessity. This reveals the goal of constructing publicness, for the achievement of which Locke's natural sciences method was put to work. Joyce Oldham Appleby famously considered that Locke's position on the 'intrinsick value' of silver in the Recoinage controversy of the 1690s amounted to a naturalization of money. Locke, Appleby argued, went on to '[turn] a mint standard into an immutable fact of nature', while rejecting 'the ideological implications of assigning

[2] Petty, *A Treatise of Taxes*, p. 88.

[3] Locke, 'Some of the Consequence that are Like to Follow Upon Lessening of Interest to 4 per Cent' (1668). Josiah Child, who was a merchant, thought that high rate of interests damaged trade, Child, *Brief Observations Concerning Trade and Interest of Money*.

[4] Carl Wennerlind, 'Money and Its Ideas: Enlightenment Debates about the Morality of Money', in Christine Desan (ed.), *A Cultural History of Money in the Age of Enlightenment* (London: Bloomsbury Academic, 2021), p. 131.

to money an extrinsic value manipulatable by the sovereign'.[5] Appleby's essentialist critique is difficult to support in the face of the evidence provided by the answer Locke made to his opponent William Lowndes, on the issue of devaluing money, in *Further Considerations Concerning Raising the Value of Money* (1696). In this work, the words 'nature' or 'natural' are not employed, except once in the Preface.[6] Moreover, Daniel Carey has argued convincingly that Locke's 'intrinsick value' is in reality 'an external value', founded on reason and on public authority, and not on nature.[7] It is impossible to do justice to Carey's treatment of the notion of 'species' in this brief comment, but ultimately, it shows that Locke knew that money would be always the result of a convention, and in the late seventeenth century, an *international convention* at that.[8] On the other hand, Courtney Weiss Smith shows that the most articulate authors participating in the debate on coinage on both sides were involved in a naturalized discourse on money.[9] My study of money as necessity makes sense of Appleby's intuition about the naturalization of money and its consequences. In the words of Stefan Eich, Locke's 'politics of depoliticizing money' can be denied only with great difficulty.[10]

However, my argument, perhaps a nuance of that idea, is that Locke's goal was the scientification of money along the lines of the New Science. In this endeavour, his doctrine of necessities was crucial. I would suggest first that Locke's method of naturalization was less straightforward than adhering to a natural value of silver, second that it was implemented much earlier in his life, and third that it represented a piece in the puzzle of his

5 Joyce Oldham Appleby 'Locke, Liberalism and the Natural Law of Money', 71 *Past and Present* (1976), p. 61; p. 64; Appleby, *Economic Thought and Ideology in Seventeenth-Century England*, pp. 199–241.

6 Locke, 'Further Considerations Concerning Raising the Value of Money' in *Locke on Money*, vol. II.

7 'The use of Coin'd Silver or Money is, that every Man in the Country where it is current by publick Authority, may, without the trouble of refining, essaying or weighing, be assured what quantity of Silver he gives, receives, or contracts for, under such and such denominations.' Locke, 'Further Considerations Concerning Raising the Value of Money', p. 414.

8 Carey, 'Locke's Species: Money and Philosophy in the 1690s'; and Daniel Carey, 'John Locke, Money and Credit', in Daniel Carey and Christopher J. Finlay (eds.), *The Financial Revolution in the British Atlantic World, 1688–1815* (Dublin Portland: Irish Academic Press, 2011).

9 Courtney Weiss Smith, 'A "Foundation in Nature": New Economic Criticism and the Problem of Money in 1690s England', 53 *The Eighteenth Century* (2012).

10 Eich, 'John Locke and the Politics of Monetary Depolitization' 17 *Modern Intellectual History* (2020), pp. 1–28. And more recently within a larger argument of money being always political, Eich, *The Currency of Politics*.

broader methodological aim to develop a new natural law and government thinking that could operate within the system of the new science.

After official investigations, consensus had already been reached in the 1620s that scarcity of money was the key reason for the commercial depression.[11] Up until the creation of the Bank of England in the late 1690s, many solutions were proposed, some of them colourful: alchemy, lotteries – which William Petty had defined as early as 1662 as 'a Tax upon unfortunate self-conceited fools'[12] – job stocking and, starting with those put forward by Robinson, Potter and many others, innumerable schemes for institutions of credit.[13] Oliver Cromwell successfully developed a plan to readmit the Jewish communities, who had been banished from England since 1290, particularly to benefit from their economic knowledge.[14] On the other hand, William Petty had written about the main implication of the publicness of money, that is, that citizens ought to pay their taxes. In order to achieve that end, he had devised a better tax system.[15] The question of the scarcity of money was further complicated by a generalized clipping of coins to extract silver from them, and hoarding the good coins, and it is in this context that Potter devised his project for Ireland.

[11] Analysing the different philosophies underlying the techniques to solve the scarcity of money see, Wennerlind, *Casualties of Credit: The English Financial Revolution, 1620–1720*, p. 31.

[12] He considered that not everyone in the world that could be cheated ought to be cheated, but since there were in the world rather plenty of this kind enthralled with lottery, it was 'rather ordained that the Sovereign should have the Guardianship of these fools'; 'in the way of Lottery men do also tax themselves in the general, though out of hopes of Advantage in particular', Petty, *Treatise of Taxes*, p. 91.

[13] Christine Desan, *Making Money* (Oxford: Oxford University Press, 2014) Ch. 8; Daniel Carey, 'Money and the Issues of the Age. Thinking about Money in the Eighteenth Century', in Christine Desan (ed.), *A Cultural History of Money in the Age of Enlightenment* (London: Bloomsbury Academic 2021).

[14] Benjamin Dew, 'Jewish Exclusions: Eighteenth-century Historians and the Expulsion of England's Jews, 6 *Intellectual History Archive* (2018); Webster, *The Great Instauration. Science*, p. 8; p. 454; on the economic and millenarian aspects of the readmission; Hunter, *Boyle: Between God and Science* (Yale University Press, 2009), pp. 85–86; p. 101.

[15] William Petty was the expert of the times on taxation starting with *Treatise of Taxes* (1662) mentioned before, until the famous *Political Arithmetic* (1676) in which he devised a method to establish a correct base for taxation by making an estimation of the stock of national wealth and the national exchanges of money, goods and services. See *The Economic Writings of Sir William Petty*, Charles Henry Hull (ed.) (Cambridge University Press, 1899), vol. I. For an assessment of the impact of Petty see, Mark Blaug, *Pre-classical Economists: Charles Davenant (1656–1714) and William Petty (1623–1687)* (Aldershot: Elgar Publishing, 1991).

11.1.1 From Potter to Ireland: Money Is Running Debt

A series of letters (1658–1659) between Samuel Hartlib, Benjamin Worsley, William Potter and Robert Wood, an Oxford scholar writing from Dublin Castle, are among Hartlib's papers. It appears that either Worsley or Wood consulted Potter on how to solve, immediately, in Ireland the dramatic scarcity of money and its poor and clipped physical condition with a view to applying the solution offered later in England.[16] In his study of the Reformers, Charles Webster took a close look at the content of Wood and Potter's discussion on 'the intrinsick value' of money. Webster noted that to some extent William Petty took these questions up later in order to translate the intrinsic value of land into its 'monetary or "extrinsick value"', and thus to ascertain a relationship between the intrinsic value of bullion and other commodities.[17] In turn, Locke started his discussion where Petty left off. Potter's original scheme (now lost) was, again, based on creating new money. It was prepared directly to Hartlib with the hope of its being made available to the Lord Deputy of Ireland, Henry Cromwell and the Council through 'the Gentleman in Ireland' (perhaps Wood). The latter wrote later in the spring from Dublin Castle asking for clarifications, which again Potter sent. These last two letters make Potter's project clear.[18] His proposal was to regulate the creation of farthings with base metals in a manner that could not be 'counterfaited'. In between, Potter was very ill, to the point that he required the services of one Thomas Babington to put his response in writing. He was also very secretive about the practical means by which clipping could be avoided. Potter's poor health and other calamities – the Lord Protector died in 1659 and Charles II returned to England the following year, leading to the fall of many of the Reformers – ensured that the resulting scheme came to nothing.[19] However, in the process, although Potter was

[16] Benjamin Worsley to William Potter, 7.4.1658 39/2/62A-63B (copy); Hartlib to Robert Boyle, 27.4.1658, in 'The Works of the Honourable Robert Boyle', T. Birch. (ed.) 2nd edition, 6 vols. (*London*, 1772). vol. VI, pp. 102–106; Benjamin Worsley to Hartlib, 20.1.1658/1659 33/2/11A-12B; Copy in Scribal Hand Thomas Babington (for Potter) to Hartlib 13.12.1658 53/30/1A-8B; Robert Wood, 'Objections to Potter's Further Work on Coinage, 15.1.1659, 33/1/41A-42B; William Potter to Robert Wood[?] 15.3.1659 30/3/11A-12B; Robert Wood to Hartlib, 21.3.1659, 33/1/48A-49B, in M. Greengrass, M. Leslie and M. Hannon (2013). in *The Hartlib Papers*.

[17] Webster, *The Great Instauration*, pp. 450–454; p. 453.

[18] Webster apparently had no access to Potter's reply to Wood's objection, Webster, *The Great Instauration*, p. 450.

[19] 'Sir, I perceive yow was informed by Mr Hartlib, that I had promised to impart unto you my way to prevent the counterfeiting of the designed Coyne which though I thinke a mistake for I remember noe such promise.' William Potter to Robert Wood[?] 15.3.1659 30/3/11A-12B in *The Hartlib Papers*.

not appointed to any public post, he again demonstrated his knowledge of money.[20] As Locke's work contains certain ideas that are similar to those expressed in the correspondence discussed here, it is possible that he knew its contents.

Quantities of money were needed for foreign trade, in order to provide shipping and all the necessaries for the transportation of commodities, to furnish the plantations and for the people there, and, obviously for domestic trade. Thus Potter proposed 'Lead & Iron, as Tin, Brass & Copper to be coyned in great peeces of 5^{li} or 10^{li} value a peece, according to their true intrinsick value as it is called'.[21] The way to make that new baser money valid currency was by means of a new law to return, or rather force into the people the money by means of the money that was owed them in taxes and public charges. The County would back that new money and, when it would be current, 'make it good' by accepting it back in the form of payment of taxes.[22] Instead of security in the form of land, Potter now argued for security to be provided through public institutions. A law would establish that 'the whole County' would be liable during six months or one year, a period in which anyone could exchange the new money for bullion if they wished. There was no danger, in Potter's view, that this would happen. No one would seek to exchange money that was valid currency. That he had England also in mind was evident when he noted as follows:

> This I thinke cannot possibly give distaste, especially if it bee begun in Ireland only, the rather, for that the silver coyned there is most exceedingly liable to counterfeiting as I heare.[23]

According to Joseph Johnson, debasing their money was among the recurrent punitive measures taken against the rebel Irish. The fact that there was no continuously open mint in Ireland for a period of three centuries following the reign of Queen Elizabeth I seems to have been the main cause of the disastrous state of Irish currency, since old, worn and debased silver coins were never replaced. Hence, when new coins were introduced, they immediately disappeared. In the middle of the seventeenth century, loan interest reached the previously unheard-of rate of 40 per cent. Johnson wrote that in 1660 currency was 'outlandish', mostly

[20] Also on the expertise of Potter, Wennerlind, 'Money and Its Ideas', pp. 107–113.
[21] Babington/Potter, 1658, 53/30/1B, in *The Hartlib Papers*.
[22] Babington/Potter, 1658, 53/30/1A, in *The Hartlib Papers*.
[23] Babington/Potter, 1658, 53/30/2A, in *The Hartlib Papers*.

clipped and counterfeited and that everyday exchanges were made 'through tradesmen's tokens' valid only locally. On the other hand, the Cromwellian settlers started to expand the foreign trade and thus good-quality foreign coins appeared in large quantities.[24] Potter also suggested that widows and orphans, who were unable to engage in trade, 'should have the priviledge to turne their estates into Bullion & deliver the same to the county office'. Since, as a consequence of the scheme, 'interest will fall to little or nothing', their stock would be managed discreetly and they would obtain a certain level of payment for it, not necessarily the interest 'that money commands', if it was too low. To become popular then, the charitable aspects ought to be emphasized, 'for cleering of all scruples, shewing the benefit thereof both towards the employment of the poore & many other wayes'.[25]

Wood was sceptical, and objected to Hartlib: 'I cannot but admire how that Chimæra should enter into his braine'.[26] Potter was sure, however, that once the new money became valid currency and one could buy things with it, no one would want to 'make it good' (i.e. demand bullion in return for it). The whole point of money was 'to procure something else therewith'. Money was after all, merely a 'medium'. The main benefits of the new currency would lie in achieving increase in the volume of money in circulation in order to enable trade and therefore acquire bullion for the County without the need to levy taxes and in 'the preventing of the plague & intolerable mischiefs that follow upon trading on private trust'. A nation needed trade or credit, and making it independent from private borrowing could only be done by having enough bullion or credit 'that will passe currant through a Nation'.

Robert Wood was especially concerned that the new money was made out of a base metal, in defiance of the universal view that coins should be made of gold or silver. In his response, Potter emphasized how little persons understood about money if they took the view that 'money of bullion [was] anything else but the running currant of the Debts of the World'. Gold and silver were not in themselves *universal* to any extent except that they passed for 'money'. And although gold and silver were accounted the best metals on which to base money, this could be changed and would mean only that a new form of money would be established in

24 Joseph Johnston, 'Irish Currency in the Eighteenth Century' 27 *Hermathena* (1938), p. 9.
25 Babington/Potter, 1658, 53/30/1B, in *The Hartlib Papers*.
26 Robert Wood, 'Objections to Potter's Further Work on Coinage, 15.1.1659, 33/1/41A-42B, in *The Hartlib Papers*.

https://doi.org/10.1017/9781009332149.013 Published online by Cambridge University Press

their place. In fact, 'the best money is nothing else but a token or a bill of a publique faith debt secured by its currantness'. In laying out his ideas Potter explained:

> money is nothing else, but that ticket bill, or token which all men among whom it runns currant & doth procure thereby Commodities upon it, are either by Law bound, or at least willing to make good in the behalf of any man that payes the same, for hee that payes money is discharged of the debt, which hee that receives it, would not consent to, but that he hopes all men will acknowledge and satisfy the money, bill or toke upon sight thereof.[27]

In this theoretical sense, of 'money as a public token of debt' that is accepted as currency, money did not belong to any 'particular persons' but to a 'whole body of those men amongst whom such money runns currant', a commonwealth, which was in Potter's view 'the Commonwealth of mankind'.[28] Against the objection that the scheme would provoke the exportation of bullion due to falls in interest, he employed an argument that Locke would also use later. People imagined that when the Dutch lend money to England, they sent over the physical bullion, but they did not. Only bills of exchange would come over to England. If Dutch loans were no longer needed, in effect, no bullion would be lost. In Potter's view the real drain of bullion, occurred through the East India trade, and that would not be stopped since it achieved abundant profit that came in from overseas.

Potter arrived also at the language of 'necessities' in his response to the complaint voiced by some that coining brass money was not an honourable measure. There was 'noe reasoning against necessity', since everyone knew that debased coinage was allowed to pass for authentic and no one was allowed to denounce it 'unlesse it plainly appeare to bee counterfeit'. This, Potter noted, was tantamount to encouraging all 'the Nations and Merchants' to employ individuals skilled in clipping money or cheating in other ways. Moreover,

> Our want of bullion, & the necessityes growing thereby cannot be hid from the world, & to seeme unwilling to have those necessityes knowne which cannot be hid, doth not diminish, but not att all preserve reputation.[29]

Potter thus exposed, again, what everybody knew: that in both England and Ireland lack of money was a source of economic distress. In order to

27 Babington/Potter, 1658, 53/30/5A, in *The Hartlib Papers*.
28 Babington/Potter, 1658, 53/30/5A, in *The Hartlib Papers*.
29 Babington/Potter, 1658, 53/30/6B, in *The Hartlib Papers*.

avoid further lending from private trust, his proposal, which had futuristic or perhaps prophetic overtones, was to produce a different type of money with base metals and to have it backed by the Commonwealth. Money was a medium and tantamount to debt agreed by people to take a certain physical form. Therefore, he made no bones as to detaching it from the traditional precious metal used for it, silver and gold.

11.1.2 Theorizing on Interest and Money

Influential economists of the past two centuries grasped that Locke's ideas on money were momentous. Karl Marx, although quoting Nicholas Barbon, was paraphrasing Locke on the key question of 'need' in the first chapter of *The Capital*.[30] John Maynard Keynes borrowed certain ideas for his monetary theory and enriched them with psychological insights lacking in Locke. Keynes considered that despite his great ideas Locke remained within a dimension of a natural sense of necessities that does not cover all that happens when human beings deal with money.[31] However, Locke's outlook was appropriate in relation to topics of natural philosophy, as evidenced in his writings on money. Less fulsome in his praise, Schumpeter nevertheless filled his *History of Economic Analysis* with Locke's novel insights.[32] The fact that money was scarce and yet a necessity seemed to have prompted Locke's economic reasoning to revolve around explaining the natural economic mechanism that made money a necessity, how to make money more abundant within that quasi-natural constitution, and the relationship of money with the other main source of wealth in England, land. Again, Boyle's mentorship is visible in this question. As early as 1665 Locke wrote to Boyle from Düsseldorf in the following terms:

[30] It is remarkable then that Nicholas Barbon, translated 'desire' as 'want of the mind', presumably to be able to establish a dialogue with Locke in his response to the latter's text in the recoinage controversy. Marx also mimicked the tendency and wrote about 'human wants' that 'spring from the stomach or from fancy, makes no difference'. Marx, *Capital: A Critique of Political Economy*, p. 27.

[31] The rate of interest Keynes wrote is 'the reward for parting with liquidity'; 'the "price" which equilibrates the desire to hold wealth in the form of cash with the available quantity of cash.' 'Locke' did not consider 'fluctuations of liquidity preference' that may occur for example for psychological motives of a wish to speculate with money. John Maynard Keynes, *General Theory of Employment, Interest and Money* (London: Macmillan, 1936), p. 107.

[32] Schumpeter, *History of Economic Analysis.*

> As I once heard you say, I find it true here, as well as in other places, that the great cry is ends of gold and silver.[33]

Remarkably, and unlike Potter, Locke no longer considered money only as a token of debt, but also as a function of interest. In particular, Locke produced a naturalistic account of usury. In one memorandum written in 1668 and enlarged in 1674, which had an innovative scientific style uncharacteristic of the period (in which texts dealing with similar issues usually displayed a polemic tendency), he noted that lending money at interest that fluctuated with the market – i.e. 'natural interest' – was a key element of the nation's economy.[34] For money was a necessity and lending it at interest at the natural level of the market was also necessary. Here, as in the other sections, the question of 'necessity' marks the ethical absence of freedom or of a voluntary element. In his *Nichomachean Ethics* Aristotle had excluded things that must necessarily happen from the sphere of deliberation as to the best and most virtuous course to take in any given situation.[35] Since virtue does not deal with necessity, as Aristotle had hinted, it was by implication meaningless to question the morality of a necessity. In the case of Locke, the language of necessity was

[33] 'Locke to Robert Boyle, 22 December 1665' in *The Correspondence of John Locke in 8 volumes*, v. I. And two years later, he reported to him, with what seemed to be a sort of common joke at the expense of the philosopher's stone, how with another colleague he was in charge of levying a tax on scholars: 'He and I are now upon a new sort of chemistry, i.e. extracting money out of the scholars pockets; and if we can do that, you need not fear but in time we shall have the lapis [the philosophers' stone]; for he that can get gold and silver out of scholars, cannot doubt to extract it any where else.' 'Locke to Robert Boyle, 6 March 1667' in *The Correspondence of John Locke in 8 volumes*, v. I.

[34] Kelly 'General Introduction: Locke on Money' in *Locke on Money*, p. 9.

[35] 'Now about eternal things no one deliberates, e.g. about the material universe or the incommensurability of the diagonal and the side of a square. But no more do we deliberate about the things that involve movement but always happen in the same way, whether of necessity or by nature or from any other cause. (…) We deliberate about things that are in our power and can be done; and these are in fact what is left. For nature, necessity, and chance are thought to be causes, and also reason and everything that depends on man. Now every class of men deliberates about the things that can be done by their own efforts. And in the case of exact and self-contained sciences there is no deliberation, e.g. about the letters of the alphabet (for we have no doubt how they should be written); but the things that are brought about by our own efforts, but not always in the same way, are the things about which we deliberate, e.g. questions of medical treatment or of money-making (….) Deliberation is concerned with things that happen in a certain way for the most part, but in which the outcome is obscure, and with things in which it is indeterminate. We call in others to aid us in deliberation on important questions, distrusting ourselves as not being equal to deciding. We deliberate not about ends but about means.' Aristotle, *The Nichomachean Ethics*, Book III, 1112a15–1112b15; Adamson, 'Making a Virtue of Necessity', p. 13.

https://doi.org/10.1017/9781009332149.013 Published online by Cambridge University Press

also the idiom of a young and responsible civil servant. Locke wrote this report during his first years as a secretary of Lord Ashley, and though it remained unpublished, the memorandum soon found its way to Ashley, who apparently distributed it widely among those occupying the highest level of officialdom.[36] John Spurr notes that the Chancellor of the Exchequer (Ashley) had been distrusted from 1661 onwards on account of his changing alliances, but nonetheless valued on the strength of his knowledge of finance and administration.[37] The fact that Locke wrote the piece on money during that early period also provides a wider political context to his recommendation on economic legislation about the rate of interest.

From May 1667 onwards, Lord Ashley was one of the six members of a board of commissioners that had been given control of the Treasury, then in a critical state after the Dutch war. C. D. Chandaman has explained the crucial role played by these men in overcoming the economic crisis, noting that despite appearances their work was successful. Their muscular handling of the situation and the novelty of their ideas allowed them to postpone until 1672 the repudiation of state debt known as the 'Stop of the Exchequer'. Chandaman takes the view that the gist of the new financial experiment they came up with entailed employing a credit-raising technique, during the extraordinary war finance situation of 1665, within the system by which ordinary revenue was produced.[38] Crucially, in the context of the study of Locke's ideas on money, the core of 'the Order system' was an attempt to attract, beyond professional moneylenders and financiers, a great multitude of small English investors to lend money to the government.[39] That this was, indeed, revolutionary may be also ascertained by comparing it with the credit-raising methods used in

[36] That the memorandum was widely distributed and is to be found among the papers of high officials in Letwin, *The Origins of Scientific Economics*, p. 156; that probably it was written for Ashley in Kelly, 'General Introduction: Locke on Money'; his work for Ashley during these years acquainted Locke with the major administrators and politicians of Restoration England, see Milton, 'The Unscholastic Statesman: Locke and the Earl of Shaftesbury'.

[37] 'Although Charles II allegedly had little faith in Ashley's integrity', presumably due to his swapping allegiance during the Civil Wars, 'he made good use of his administrative and financial acumen and his parliamentary eloquence.' Ashely had changed allegiance from Royal to Parliamentarian during the Civil Wars in 1644, and then again in support for the returning King in February 1660, John Spurr, 'Shaftesbury and the Seventeenth Century' in *Anthony Ashley Cooper*, pp. 11–14; quote in p. 15.

[38] They were the Duke of Albemarle, Lord Ashley, Sir Thomas Clifford, Sir William Coventry and Sir John Duncombe, Chandaman, *The English Public Revenue 1660–1688*, p. 213.

[39] I follow C. D. Chandaman on the system devised by the Commissioners and its successes and failures, Chandaman, *The English Public Revenue 1660–1688*, generally ch. 6; p. 212.

previous years.[40] The Commissioners thought in terms of an attractive offer involving simple and guaranteed means of repayment from funds reserved for that purpose, specifically from the farm and collection of certain taxes, that was clearly more appealing than the previous complex repayment system involving tallies.[41] Registered orders could be used as security and as payment for goods and services.[42] Chandaman notes that during 1667/68 this new financial system performed a vital service for the government. However, it was impossible for the system to keep pace with alarming rises in state debt by raising more credit, not even by 'increasing the rate of interest to 10 per cent'.[43] Furthermore, an overly optimistic estimate of tax revenues on which the Treasury counted appears to have led to the system's ultimate failure. Although the financial scheme was ingenious, without sufficient funds to pay the interest, the system led into a trap. Chandman notes that credit had not only been encouraged, but artificially created. Katharina Pistor also recalls that people paid the tax collectors with notes issued by goldsmiths backed by sovereign debt. When the debt was due, the tax collector could exchange it for coined money. With the meagre quantities of coined money in England, that was another recipe for disaster. When Crown or goldsmiths defaulted, tax collectors 'would impose a "coins only" rule' for collecting taxes, due to the fear that the notes would be worthless.[44] The colossal burden placed on Ashley and the other Treasury Commissioners as public servants is clear and explains the feeling at the time that money was desperately

[40] Examples of how the government had risen credit abroad in times of crisis, basically going abroad to find professional lenders, in John Guy, *Gresham's Law, The Life and World of Queen Elizabeth I's Banker* (London: Profile Books, 2019); Ian Blanchard, 'English Royal Borrowing at Antwerp 1544–1564', in M. Boone and W. Prevenier (eds.), *Finances publiques et finances privées au bas moyen âge* (Leuven-Apledoorn : Garant, 1996). Moshe Arie Milevsky casts a less heroic frame, suggesting that powerful moneylenders might have been influencing new thinking on rate of interest at the time; he relates the connections between the wealthy moneylender John Banks, who survived contemporary upheavals and was richer after them, and Locke. Moshe Arie Milevsky, *The Day the King Defaulted. Financial Lessons from the Stop of the Exchequer in 1672* (Cham: Springer, Palgrave, Macmillan, 2017).

[41] A version of which we find again in the 1690s, Richard A. Kleer, *Money, Politics and Power. Banking and Public Finance in Wartime England, 1694–1696*, (Routledge, 2017). On the seventeenth-century systems of issuing public bonds and minting money see Desan, *Making Money*, ch. 6.

[42] Chandaman, *The English Public Revenue 1660–1688*, p. 212

[43] Chandaman, *The English Public Revenue 1660–1688*, p. 220.

[44] Katharina Pistor, 'From Territorial to Monetary Sovereignty' 18 *Theoretical Inquiries in Law* (2017), p. 509.

needed. Looking at this specific crisis as a moment in which Locke started to focus on 'necessities' as a method confirms Daniel Carey's recent thesis that economic and financial crisis generated the most striking theoretical thinking.[45]

Locke wrote and published on the question of money on several other occasions, significantly in the *Two Treatises of Government* and in various writings on the 'Recoinage Controversy' of the 1690s. In tune with his ideas on natural law, his proposals over the 30 years during which he wrote on money were in favour of promoting freedom of trade and against protectionism, regulation and monopolies. As long as a quasi-natural system, as the bottom line of a healthy and honest economy was respected, non-constraint was Locke's preferred strategy for the national economy. A sense of encouragement to all citizens to participate in monetary transactions, which in his view would have distributive effects across the nation emerges from the recommendation in his writings that the 'legal Use' or interest on money be kept very near to the 'Natural Use', which he defined as 'that Rate of Money which the present Scarcity of it makes it naturally at'. On the contrary, with a lower legal use of money or interest rate, Lombard Street, or in other words the professional lenders would drive all the business on money there, due to the fact that people would not lend at so low a price or not risk breaking the law.[46] Over time, Locke developed the fundamental axiom of natural philosophy that in order to avoid epistemological and moral chaos rational individuals ought to take hints from nature as guidance. In the economic arena, the balance between freedom and nature is also mirrored in the manner in which Locke viewed the relationship between natural law and natural philosophy.

In his early writings, Locke stated the scientific fact that money and general moneylending were necessities for the national economy and argued in favour of paying the natural interest or the interest of the market for the use of money, without regulatory constraints, in a local and general environment of scarcity. From this followed the effect, subtly articulated, though clearly unpacked in the texts, that moneylending, traditionally known as usury, was unrelated to personal moral conscience. Locke was the first theoretician to exhibit an absolute detachment from tradition with regard to usury, more so even than those who only knew 'the

[45] Carey starts to consider Locke's spectacular intervention in the Recoinage crisis in the 1690s, Carey, 'Money and the Issues of the Age. Thinking about Money in the Eighteenth Century', p. 279.

[46] Locke, 'Some Considerations of the Consequences of the Lowering of Interest', p. 216.

https://doi.org/10.1017/9781009332149.013 Published online by Cambridge University Press

practick'.[47] Moreover, in defining money as a necessity, Locke also justified that a price – interest – must be paid for it.

He also articulated analytically his conviction that the use of money and land behave similarly when producing economic value. At every stage when thinking about money and trade he framed his reasoning in terms of natural law and natural philosophy through his idea of 'the international' – of what lies outside England – and of the foreigner, who will return when he or she pleases to the reality and truth that exists beyond the borders. His opposition to devaluing money sprang from this outlook.[48] The international is a space which checks almost with the force of nature all value and reasoning about trade and money. In that sense, money was for Locke intrinsically universal. In Locke's main text on political theory, *Two Treatises*, money was regarded as being the result of an agreement among human beings and thus part of the public reason. Its accumulation was not only allowed but convenient for the economy as a means of putting money to use and fostering industriousness – i.e. transforming money into capital and thus multiplying production. On the other hand, he was also defending the economic independence of the sovereign nation when he described money as a necessity of the nation.[49] That the public money was integrated in an international global system, was clear for every one, as the system of public debt had worked like that for centuries. But to think of money as a necessity assumes that also private money is integrated in the national economic system.

Locke's view in the 1660s and again in 1691 was that the most prosperous course for government was to let the rate of interest gravitate to its natural level according to market forces. As scholars now acknowledge, during the disputes on the recoinage of the clipped money of the 1690s that made him famous, Locke displayed a mastery of theory, and his

[47] Towards the end of the century the merchant Nicholas Barbon reproached Locke (wrongly, as visible in his correspondence) that he did not know the practice, but was 'only acquainted with the Speculation and Theory of Foreign Coins.' Nicholas Barbon, *A Discourse Concerning Coining the new Money Lighter in Answer to Mr. Lock's Considerations about Raising the Value of Money* (London: Printed for Richard Chiswell) Early English Books Online Text Creation Partnership 2011, http://name.umdl.umich.edu/A30882.0001.001, p. 19.

[48] Carey notes that this was one of the strongest points in the 1690s recoinage controversy: 'foreign traders would expose arbitrary manipulations of value and raise their prices accordingly, calculating according to international not domestic valuations of silver'. Carey, 'Money and the Issues of the Age', p. 285.

[49] See on this question, Pistor, 'From Territorial to Monetary Sovereignty'.

argument evidently founded on experience, was accordingly the most far-reaching, logical, prudent, sophisticated and modern, and therefore the most convincing, of those being urged at the time.[50]

11.1.3 Locke's Theory of Interest

Locke's early texts, akin to memoranda, were written, as mentioned before, during his tenure as Lord Ashley's secretary from 1666 onwards at which time public debates concerning lowering interest on money were taking place.[51] The most impressive aspect of his study was his ability to see all the systemic dependencies of a series of elements: the use of money and its price, the intensity of trade, land rents, land prices, commodity prices, labourers' wages, food prices, the balance of trade and the role of public authority. Interest falls and rises, Locke explained, did not in themselves help produce more commodities or more profit from land, contrary to the view taken by other commentators who looked to Holland for this purpose. Since in England only private banks existed, whose aim was to make a profit, they had the advantage of always having the possibility to place their money on the international market in search of a better price. An uncontrolled flow of money to foreign countries, Locke argued, would stop trade. Thus, money being a 'necessity' to trade, the safest course by which to face the contemporary scarcity of specie was to leave interest at the natural level of the market.[52] That would not tempt moneylenders and borrowers to go abroad, which would be detrimental for the nation.

At the outset, Locke, the natural philosopher, described money as having a double nature: it was a commodity that was employed as a means by which to achieve exchange for other commodities;[53] and it was also equivalent to land, that is, fruitful in itself. As noted, Potter did not identify this latter attribute, regarding money as having rather the quality of running

[50] Locke, 'Some Considerations of the Consequences of the Lowering of Interest, and Raising the Value of Money'; Locke 'Further Considerations Concerning Raising the Value of Money'; Appleby 'Locke, Liberalism and the Natural Law of Money'; Kelly, 'General Introduction: Locke on Money'; Carey, 'John Locke, Money and Credit'; Ormazabal, 'Lowndes and Locke on the Value of Money'; Carey, 'Locke's Species: Money and Philosophy in the 1690s'; Felix Waldmann, 'Additions to De Beer's Correspondence of John Locke' 15 *Locke Studies* (2015); Eich, 'John Locke and the Politics of Monetary Depolitization'.

[51] See Kelly, 'General Introduction: Locke on Money', pp. 6–12.

[52] Locke, 'Supplement' of 'Some of the Consequences that are Like to Follow Upon Lessening of Interest to 4 per Cent', p. 171.

[53] An explanation of this Aristotelian doctrine, in Kaye, *Economy and Nature in the Fourteenth Century*, pp. 46–51.

debt. For Locke the receipt of interest in relation to the use of money was therefore analogous to the receipt of rents for the use of land. Locke recalled the classic theory about the nature of money as something unfruitful, without including its damnatory critique.

> for Land produces naturally something new profitable and of value to man kinde, But mony is a Barren thing and produces nothing, but by compact transfers that mony was the reward of one mans Labour into an other mans pocket.[54]

This explanation also described money as the result of the agreements between human beings, and not as a natural thing. However, the interesting difference between money and land, in Locke's view, was that, unlike land, money never lay fallow or barren. Money was constant and held its value across the country, making it possible for the public magistrate to establish a fixed rate of interest – money was in this sense a sound instrument of government.[55] In its capacity of being equivalent to land, interest was a legitimate reality – 'profit for the Loane of mony, is as equitable and Lawfull as receiving rent for Land and more Tolerable to the borrower'.[56]

As noted, it was the fact that money was unequally distributed – that it was both a means of exchange and a source of wealth – that allowed for lending.[57] Locke defined interest in the exchange of money as *commodity*, 'addeing to mony by agreement or publique authority a quality which naturally it hat not, vizt. a faculty of increasing every yeare 6 li per Cent'.[58] At the outset, this definition made clear that Locke neither held

[54] Locke, 'Supplement' of 'Some of the Consequences that are Like to Follow Upon Lessening of Interest to 4 per Cent', p. 181; Aristotle's *Politics* considered unnatural that money, an artificial thing would generate more money. The scholastics pick up this idea, e.g. Duns Scotus: 'Money has not of its *nature* have any fruit' or Jean Gerson 'it is against nature that money should breed money'. See about this and the quotes in Langholm, *The Aristotelian Analysis of Usury*, ch. 3; p. 59. See also section 10.2.1.

[55] Locke, 'Supplement' of 'Some of the Consequences that are Like to Follow Upon Lessening of Interest to 4 per Cent', p. 180.

[56] Locke, 'Supplement' of 'Some of the Consequences that are Like to Follow Upon Lessening of Interest to 4 per Cent', pp. 182–183.

[57] See on the function of money as a store of wealth, explaining John Maynard Keynes's theory of the monetary framework of economic life in Gordon A. Fletcher, *The Keynesian Revolution and Its Critics: Issues of Theory and Policy for the Monetary Production of Economy* (New York: Palgrave Macmillan, 1987), pp. 98–100. That Keynes was another keen reader of 'the great Locke' is visible in Keynes, *General Theory of Employment, Interest and Money*. Keynes's analysis of these ideas of Locke that he attributed to a controversy with William Petty, p. 213.

[58] Locke, 'Supplement' of 'Some of the Consequences that are Like to Follow Upon Lessening of Interest to 4 per Cent', 189.

a naturalistic conception of money nor of any immutable natural laws governing it.[59] His position in the recoining controversy described below may be partly interpreted as an effort to educate the ruling class in how to develop international credit and trust. The point is important because it confirms his consistent anti-essentialist position as a natural philosopher. Instead, Locke borrowed the centrality of the idea of 'system' and 'needs' from natural sciences to develop his theory of the economic process.

It follows from Locke's thinking outlined earlier that it would therefore be prejudicial for the nation to have a low interest rate on money. A nation became wealthy as a man became wealthy. A positive balance of trade and avoidance of expenditure on foreign luxury goods were necessary conditions for that. Furthermore, in order to maintain strong production of commodities and be able to trade with them, landlord, labourer and merchant needed money. These three together constitute 'trade', whereas it is startling that he did not include the 'moneylender' in the group. By 'money' Locke primarily meant bullion, silver and gold. He took the view, at least initially, that other kinds of payment founded on trust were in principle suspect. Silver and gold, on the other hand, were universal means of payment, and thus had almost an 'intrinsicke naturall worth'.[60] Locke employed the language of necessities of nature in a sophisticated, philosophical way, removed from simplistic analogies still in use even in the 1690s. For instance, James Hodges referred to the needs of human beings, but he was adamant about the absurdity of comparing the natural substance of silver with that of a 'nourishing' bread. That 'he who is hungry cannot eat Silver, nor he who is thirsty drink it; nor he who is naked clothe himself with it; nor he, who is cold, warm himself with it; nor he who is faint, make a Cordial of it, to revive him; nor he who is wounded or sick, make a Plaster or Medicin of it, etc.' Silver had, in a word, no possibility of supplying for 'any useful necessity or convenience' farther than 'in its capacity into certain Vessels or Instruments'.[61]

Unlike Josiah Child's psychological insights about the English economy, which were relevant, but disconnected, Locke provided all his facts and economic analysis within the framework of a unifying

59 See on the point against Locke's naturalism on money in particular, Carey, 'John Locke, Money and Credit'.

60 Locke, 'Supplement' of 'Some of the Consequences that are Like to Follow Upon Lessening of Interest to 4 per Cent', p. 189.

61 James Hodges, *The Present State of England, as to Coin and Publick Charges: Treating of the Necessity of More Money before Taxes can be effectual & other questions* (London: A. Bell, 1697), p. 267; p. 78; see on this question Weiss Smith, 'A "Foundation in Nature"', p. 280

https://doi.org/10.1017/9781009332149.013 Published online by Cambridge University Press

psychology.[62] Locke employed a natural psychology according to which *needs rule people's behaviour* – and not, as later would be usual, desire.[63] The necessities of life and trade that only money can provide force all individuals, as individuals and as merchants, to crave money. And that necessity for money that made all equal could not be controlled through legislation.

> If you doe want money that want will still force you to borrow of your Neighbours and at the rate your Necessity not your Lawes shall set, Or else if there be scarcity of money it must hinder the Merchants buying and the Labourers manufactury.[64]

Since 'necessity' ruled demand for money, lowering the legal interest rate to 4 per cent would increase the size of the market for those with the skill and capacity to circumvent the law, that is, usurers. It would also increase the hoarding of money by those hoping for better opportunities to come along in the future. The upshot of both these things would be to make money scarcer. Locke's solution was therefore to allow money to remain at its natural rate of interest. When this rate was very high, his solution – restating some of Robinsons' tropes – lay in 'Generall frugallity and Industrey' and 'being Masters of the trade of some commodity' on which the English would be able to set the price.[65] The most common way in which the 'naturall Interest' was raised occurred when money was 'little in proportion to the trade of a Country for in trade every body calls for money according as he wants it'.[66] Any attempt to lay down a legal interest rate in times when money was scarce was a lost enterprise, 'the want of Money being that alone which regulates its price'. And to show how money was really a necessity, Locke made the comparison between setting a price 'upon wine or silks', which was hard enough, and to set a price on 'Victualls in a time of famin' that was 'impossible'. For money was to trade what food was to life: 'necessary'.[67]

62 Child, *Brief Observations Concerning Trade and Interest of Money.*

63 As John O'Brien has noted, Locke deliberately refrained from employing the term 'desire' in the context of money. O'Brien, 'John Locke, Desire, and the Epistemology of Money'.

64 Locke, 'Some of the Consequence that are Like to Follow Upon Lessening of Interest to 4 per Cent' (1668), p. 168.

65 Locke, 'Some of the Consequence that are Like to Follow Upon Lessening of Interest to 4 per Cent' (1668), p. 171.

66 Locke, 'Some of the Consequence that are Like to Follow Upon Lessening of Interest to 4 per Cent' (1668), p. 172.

67 'For money being a Universall commodity, and as necessary to trade as food is to life, every body must have it at what rate they can get it, and unavoidably pair deare when it is Scarce'. Locke, 'Some of the Consequence that are Like to Follow Upon Lessening of Interest to 4 per Cent' (1668), p. 170; p. 172.

The scarcity therefore made money more expensive. Remarkably, however, scarcity was not the primary cause for money being more in demand: it was always necessary that the individual, labourer, merchant and landlord constantly exchanged money for goods and labour.

> Every man therefore … must have at least soe much money, or soe timely recruites as may in hand or in a short distance of time satisfie him who supplies him with the necessaries of his life or of his trade, for nobody hath any longer those supplies then he has money or Credit, which is noething else but an assurance of money in some short time, so that it is requisite to trade. There should be soe much money as will keepe up the Landholders Labourer's and Brokers Credit, and therefore ready money must be constantly Exchainged for wares and Labour or follow within a short time after.[68]

In the 'Supplement' to the 1668 text, Locke went on to show how lowering the interest rate would increase the value of land and annuities but not immediately the price of commodities. The reason for this was that the price of the latter depended on the scarcity of the commodity and on its nature – exactly as it happened with money. Locke drew a distinction here between money as a form of commodity and money as a substitute for land. As he explained it, money as a commodity provides *directly* for the necessaries of human life: 'mony has a value as it is capable by exchange to procure us the necessaries or conveniencies of life, and in this it has the nature of a commoditie'.[69] The corollary was that 'things absolutely necessary for Life, must be had at any rate' but 'things convenient', would be obtained only as they stand in relation to other conveniences.[70] Locke's argument was then that the relative scarcity of a commodity affected its price, especially if no other thing could be used as a substitute for it, and also the proportion of their quantity and 'their vent, which vent is nothing Else but the passing of Commodities from one owner to another in Exchange'. Again, 'the vent' of a commodity, to use Locke's own expression, was explained by necessity. The 'vent' of a commodity

> depends upon its necessity or usefulness for whatever is necessary men give any proportion of mony for it, rather than goe without it, and in such things the scarcity of them alone makes their prices.[71]

68 Locke, 'Some of the Consequence that are Like to Follow Upon Lessening of Interest to 4 per Cent' (1668), pp. 173–174.

69 Locke, 'Supplement' of 'Some of the Consequences that are Like to Follow Upon Lessening of Interest to 4 per Cent', p. 180.

70 Locke, 'Supplement' of 'Some of the Consequences that are Like to Follow Upon Lessening of Interest to 4 per Cent', p. 179.

71 Locke, 'Supplement' of 'Some of the Consequences that are Like to Follow Upon Lessening of Interest to 4 per Cent', p. 178.

In turn, the function of money as a substitute for land, yielding interest on its use, was to serve *directly* the necessities of trade. In sum, as an instrument of exchange money offered a means of meeting individuals' needs, while as equivalent to land, yielding interest, it served the needs of society and trade more generally and in particular of the economy of the country. Similarly, that it was fair that the tenant paid rent to the landlord: 'he that has skill in trafficke but has no money too, enough to exercise it, has not only reason to exercise it and drive his trade and get a Livelihood', but evidently 'to pay use for that mony'. Since money was a necessity for country and trade, to pay interest for it was legitimate, notwithstanding opinions of the immorality of the practice:

> From whence it is Cleere that borrowing mony upon use is not onely by the necessity of affaires and the Constitution of Humane society unavoidable to some men, but that also to receive profit for the Loane of mony is as equitable and Lawfull as receiving rent for Land and more Tolerable to the borrower, notwithstanding the opinion of some overscrupulous men.[72]

The gist of Locke's reasoning was, in conclusion, that lowering the interest, although it would make 'money as land' cheaper, it would make money as a commodity scarce, and thus 'dearer' – in turn this would make the value of land in relation to money more expensive.[73]

In 1691 he finally published a tract entitled *Some Considerations of the Consequences of the Lowering of Interest and Raising the Value of Money*, where Locke repeated many of the ideas outlined earlier, often in the same words, adding perspectives on debt and credit to his insights on trade.[74] The 'unusual' agreement he signed in 1691, stating that 'the sole right' in relation to that tract belonged to him, indicates that he considered the need to establish his original authorship pressing enough to take that uncharacteristic trouble.[75] If anything, the emphasis on the 'necessities of nature' is intensified in that text. Locke described again money as a necessity in a civilized society, as it was the only way by which human beings' natural needs could be met. Indeed, it was only out of necessity that anyone would ever request a loan:

[72] Locke, 'Supplement' of 'Some of the Consequences that are Like to Follow Upon Lessening of Interest to 4 per Cent', pp. 182–183.

[73] Locke, 'Supplement' of 'Some of the Consequences that are Like to Follow Upon Lessening of Interest to 4 per Cent', pp. 183–184; pp. 188–189.

[74] 'Upon this new survey of them, I find not my thoughts now to differ from those I had near twenty years since: they have to me still the appearance of truth' Locke, 'Some Considerations of the Consequences of the Lowering of Interest, and Raising the Value of Money', p. 210.

[75] Kelly 'General Introduction: Locke on Money' in *Locke on Money*, p. 132.

> no Man's borrows money, or pays Use, out of mere Pleasure: 'Tis the want of money drives Man to that Trouble and charge of Borrowing: And proportionally to this Want, so will everyone have it, whatever Price it cost him.[76]

As was the case in his early writings, the level of necessity – 'the want' – is the only instrument by which to determine the rate of interest on money. 'Law cannot keep him from taking more *Use* than you set (the Want of Money being that alone which regulates its Price)'.[77]

The philosophers discussed in the previous chapter worked also on the principle that money was necessary. Potter argued that money was a public matter and therefore must be secured on the basis of public and not private trust. Utilizing a different and more sophisticated philosophical approach to the monetary economy, Locke described money as a *necessity*. This scientific way of dealing with money contributed to stabilizing its meaning and its function, which was universal. The direction in which the philosophical anti-essentialism of corpuscularianism might lead, radical nominalism, with money only having nominal value, posed a risk to morality and politics.[78] With his natural sciences approach based on necessities, Locke built a middle way in terms of method between corpuscularianism and Aristotelian metaphysics that suited social sciences and institutions such as money.

11.1.4 Money as Necessity

First in an article for the *British Journal of Philosophy* and then recently on a book on the unconscious culture of companies in modernity, John O'Brien has addressed the connections between Locke's logic of desire in *An Essay Concerning Human Understanding* and the epistemology of money in his economic writings.[79] The central question that O'Brien poses, which is also relevant here, concerns Locke's strenuous efforts, noted before, to avoid incorporating desire in his published writings on money. In fact, O'Brien argues, 'Locke goes to the trouble of inventing a new economic term [vent] in order to keep desire out of representation'.That is what, as tradition has it, most distinguishes him from the era of the classical economists identified with Adam Smith's economy of

[76] Locke, 'Some Considerations of the Consequences of the Lowering of Interest, and Raising the Value of Money', p. 211.
[77] Locke, 'Some Considerations of the Consequences of the Lowering of Interest, and Raising the Value of Money', p. 214.
[78] This point in Carey, 'Locke's Species: Money and Philosophy in the 1690s'.
[79] O'Brien, 'John Locke, Desire, and the Epistemology of Money'.

desire.[80] O'Brien goes on to interpret Locke's epistemology and morality in *An Essay* as an idealized version of the symbolic economy of the period. Locke successfully resisted a new devaluation of money in the 1690s, when clipped coins had lost much of their original weight, and stubbornly advocated new minting as to regain the lost weight of the coinage on the ground of the intrinsic value of silver.[81] In O'Brien's view, the connection that Locke unconsciously drew between his economy and his philosophy was to contain desire for money by keeping it scarce.[82] The interpretation is suggestive. However, O'Brien's depiction of Locke associating 'negativity' and 'desire' goes against the thesis in Book II of *An Essay*.[83] There Locke explains that human beings are exclusively motivated by forms of desire – up to the desire for God – which is ultimately another way of stating that are only motivated by love.

> I am forced to conclude, that *good*, the *greater good*, though apprehended and acknowledged to be so, does not determine the *will*, until our desire, raised proportionably to it, makes us *uneasy* in the want of it.[84]

In *An Essay*, desire is not defined through negativity but through consciousness of 'want' or 'lack' of something, of a necessity. O'Brien accurately notes Locke's ambivalence about money and how he avoided integrating the idea of desire into his monetary texts, while others, made profligate use of it.[85] Here is worth noting Daniel Carey's view that Locke's position in the recoining controversy, in terms of his insistence that 'the meaning of money must remain the existing definition of its value at the Mint, i.e. 5s. 2d. per ounce' was in fact a moral argument about rigour and curbing the tendency to tamper endlessly with the value

[80] 'Desire, for so long condemned as mere avarice, was now widely heralded as the force that drove the trade upon which the social order depended, and, naturalized into an irreducible constant that motivated all participants in the marketplace, it lent economic thought a degree of coherence that guaranteed its systematicity.' John O'Brien, *Literature Incorporated. The Cultural Unconscious of the Business Corporation, 1650–1850* (Chicago: University of Chicago Press, 2016), p. 40; and O'Brien, 'John Locke, Desire, and the Epistemology of Money', p. 696.

[81] This standpoint would be proudly maintained until the twentieth century.

[82] O'Brien, *Literature Incorporated: The Cultural Unconscious of the Business Corporation, 1650–1850*, p. 51.

[83] O'Brien, *Literature Incorporated: The Cultural Unconscious of the Business Corporation, 1650–1850*, p. 58.

[84] Locke, *An Essay*, II. 21 §35.

[85] O'Brien also describes Nicholas Barbon's *A Discourse of Trade* (1690) as 'a virtual hymn to desire'. O'Brien, 'John Locke, Desire, and the Epistemology of Money', p. 705.

https://doi.org/10.1017/9781009332149.013 Published online by Cambridge University Press

of money.[86] Nevertheless, as O'Brien recalls the charge that James Hodges levelled against Locke was that he avoided to describe desires in an area that was ruled by them:

> And seeing it is equally known to every one that neither the Government nor any Trader do call for Money, to give one Piece for another, or one bag or Sum for another in the same Quantity and Fineness of Silver; what can be expected to the Purpose from a Discourse of Coin, which standeth wholly upon such a fundamental Point, as considereth Silver only in respect of it self, and not in respect of any of those Ends for which it is desired, and for which it is only needful or useful?[87]

In comparison with Locke's own theory of money, Hodges described money here merely as a commodity of exchange, not as equivalent to land, thus yielding the equivalent to rent. But, what if the desire for money was not for something that one may buy with money, but for money *itself*? Money could be desired in that double nature, as a commodity or for itself. Locke, I want to suggest, was well aware of the psychological appeal of the promising future of profit, and also of its extreme selfish expressions, in a word, of the greed for money itself or the love for money. Despite the fact that he lived in a society threatened by materialism, money is conspicuously absent from moral discussions of good and bad desire in *An Essay Concerning Human Understanding*. However, his anthropology exposes the role of desires in morality and stresses the distinction between good and bad desires. Unlike apparently James Hodges in the quote mentioned earlier, Locke recognised the possibility of desiring money only for the sake of having more money.[88] But remarkably, in his theory of money, he opted to gloss over the ungodly desires, plausibly as a moral pedagogical exercise: money ought not to be viewed as an object of selfish desire. Hence he explained it only as a necessity, that is as a means to serve the public sphere of the commonwealth.

I have argued in this section that in his economic writings Locke treated money as a 'necessity' of the basic economic system he described.

[86] Carey, 'Locke's Species: Money and Philosophy in the 1690s', p. 379; see also Felix Waldmann, 'Additions to De Beer's Correspondence of John Locke' 15 *Locke Studies* (2015), pp. 31–42.

[87] Hodges, *The Present State of England, as to Coin and Publick Charges*, pp. 149–150; also O'Brien, 'John Locke, Desire, and the Epistemology of Money'.

[88] With regard to James Hodges's hedonistic naivité, it is telling that one of the measures he proposed to King William was to confiscate all the plate of the people and turned it into money and that he marvelled about 'the unreasonable Fondness, wherewith many are affected towards their Plate' Hodges, *The Present State of England, as to Coin and Publick Charges*, p. xiv.

This was a theory he developed early on, in the late 1660s. In the particular context of the scarcity of money to the point where the national economy stagnates, money embodies in literal terms the necessities of the nation. Hence his proposal to stimulate the use of money by means of allowing a natural price to interest, rather than lowering it legally. Moreover, his scientific theory of promoting an unchecked interest for the use of money glossed over the traditional caution against money made by moralists and theologians alike. Instead, Locke continued to develop the insights that his philosophical theory of necessities offered for monetary theory. On the one hand, this is consistent with his continuous concern over the scarcity of money and the promotion of means to make good money abundant. On the other hand, his means of making an intervention as a moral philosopher appeared to have been in the spirit of Jan Comenius's 'Professor of Necessities': by exposing the right knowledge about which things were necessary, in this case, money. As we will see in the last chapter, instead of disapproving of money in particular, what Locke did as a moralist was to map out a new philosophical means of determining what was necessary for salvation, and human necessities and the necessities of the nation – and so money – were important in it by signalling a right moral decision.

11.2 The Morality of Capital

11.2.1 Money as Reason of State

The 1690s were a period of intense capitalization when the London stock market took off.[89] From the beginning of the reign of William and Mary, moneyed men embodied the reason of state.[90] At the very least the eternal truth that land, rather than stocks, constituted the wealth of the country started to be questioned. Locke was both traditional, following James Harrington, in holding the view of the importance of land; but also modern with a view to the global economy of natural resources that Boyle had

[89] A fact attributed partially to the war finances, see Giles Parkinson, 'War, Peace and the Rise of the London Stock Market', in Sophus A. Reinert and Pernille Røge (eds.), *The Political Economy of Empire in the Early Modern World* (Hampshire: Palgrave Macmillan, 2013), pp. 131–146.

[90] Kleer, *Money, Politics and Power, Banking and Public Finance in Wartime England, 1694–98*; Marjolein T. Hart, 'The Devil or the Dutch: Holland's Impact on the Financial Revolution in England, 1643–1694' 11 *Parliaments, Estates and Representation* (1991), pp. 39–52.

envisaged.[91] The nation was, of course, becoming the centre of an empire during that period. From his return to England from Holland in 1689 up until his death in 1704, Locke immersed himself in developing a new view of economic policymaking for the country. Through his work with the Board of Trade, his political and economic pieces, his contribution to shaping legislation before parliament and working in close collaboration with the leading statesmen of the day such as Sir John Somers John Locke made history as a practical philosopher.[92] His correspondence shows that Locke invested money in trade and capital in the London Stock Market – rather a steady investor than a greedy one. His commitment to the government, to 'the publick good' and to the English nation shone through in the intensive work he carried out for the Board of Trade and in the promotion of English trade and capital, despite seriously failing health, but also in the way he personally invested in the public debt caused by war.

'Commerce' was the only way to finance the needs of the state, but as he had explained scientifically, commerce needs money.[93] Moreover, commerce was not enough in itself. Istvant Host has described the point at which free trade became a reason of state. Influential English economists and analysts of trade such as Charles Davenant (1656–1714) advocated the advantages of free trade as being equal to ensuring that resources gained on the international markets would suffice to service public debt, even for a war economy.[94] In his response to Davenant, John Pollexfen one of the seven members, alongside Locke, of the first Board of Trade made clear the position of key political actors. He entertained major doubts as to the prudency of leaving public finances to the hazards of the (international) market.[95] Credit was key to addressing many problems of the state and

[91] 'But the *chief matter of Property* being now not the Fruits of the Earth, and the Beasts that subsists on it, but the *Earth it self*; as that which takes in carries with it all the rest: I think it is plain, that Property in that too is acquired as the former [through labour].' Locke *Two Treatises of Government*, II §32; Harrington, *The Oceana*; on this question of Boyle, see ch. 6.

[92] 'What are we to think then of the relationship between the two men in 1695, when we find Somers the leading figure in the government, in the Cabinet Council when William III was in England, and amongst the Lords Justices who governed in the King's name when he was out of the country?' Laslett, 'John Locke, the Great Recoinage, and the Origins of the Board of trade: 1695–1698', p. 379. On this period may be watched, the *2021 Carlyle lectures: John Locke and Empire* by Mark Goldie.

[93] Locke, 'Some Considerations of the Consequences of the Lowering of Interest, and Raising the Value of Money', p. 222.

[94] Hont, 'Free Trade and the Economic Limits to National Politics: neo-Machiavellian Political Economy Reconsidered', p. 45; p. 57 and generally.

[95] Hont, 'Free Trade and the Economic Limits to National Politics: neo-Machiavellian Political Economy Reconsidered', pp. 96–100;

money would not come merely from fluctuating trade. Moreover, bringing about mass participation in financing the national debt also called for general moral approval of the financial system that emerged after the Whig Revolution.[96] The operation termed 'the financial revolution' occupied the English nation for almost a century and it is certain that the first shot was fired with the arrival of William and Mary from Holland, and also John Locke, who had been in that country in an exile of sorts for five years.[97] Debates are still ongoing as to how he occupied himself during his stay in Holland. He completed his *Essay*, which must have been enough work for the period. But what we know of Locke would tend to indicate with some degree of certainty that he spent much of his time in Holland *learning* from the Dutch also in the field of finances.

John Munro has argued that in effect the financial revolution had occurred in Flemish cities by the late medieval period and that it was general in Europe by the sixteenth century. Its most important aspect was, according to Munro, that public debt changed the means of finance from interest-bearing loans to the sale of life annuities or rents. He argues that that occurred due to the Church's anti-usury campaigns in the late Middle Ages. In this respect, Locke's personal preference for annuities is intriguing. Peter King, his cousin, once suggested to Locke that he invest £1000 in malt tickets since he envisaged that a new and beneficial bill would be passed. Locke was doubtful whether the bill would ever pass with the new government, and although he trusted King completely, he answered:

> I who aime not at growing mightily rich could be content with less profit upon surer funds and therefore I am inclind to have it laid out either in Bank or East India stock or some such other funds where it might pay interest and yet be ready at any time to be had, when I could get a good land security for it. For there is my desire to place it.[98]

[96] P. G. M. Dickson, *The Financial Revolution in England: A Study in the Development of Public Credit 1688–1756* (London: Macmillan, 1967); Parkinson 'War, Peace and the Rise of the London Stock Market'; Murphy 'Dealing with Uncertainty: Managing Personal Investment in the Early English National Debt'. On Locke's expressions for unity after the Revolution, James Farr and Robert Clayton, 'John Locke on the Glorious Revolution: A Rediscovered Document' 28 *The Historical Journal* (1985); Mark Goldie, 'John Locke on the Glorius Revolution: A New Document' 42 *History of Political Thought* (2021).

[97] Dickson, *The Financial Revolution in England*; on how the King was made dependent on Parliament, see Clayton Roberts, 'The Constitutional Significance of the Financial Settlement of 1690, 20 *The Historical Journal* (1977).

[98] The bill was meant for supplying deficiencies ('deficiencies in the return of the taxes on which the Exchequer Bills were issued') promising a discount of '18 or 19 l. per cent' 'Peter King, later First baron King to Locke, London April 25 1702'; 'Locke to Peter King, later

It seems safe to think that the aim of addressing money matters by means of the new scientific temper and scientific methods of the day was characteristic of the English financial revolution, and that Locke's monetary thinking was instrumental in this regard. The financial innovations involved a complex combination of historical and political factors. In relation to public debt, commerce and speculation with capital, the architects of the new state sought to imbue economic thinking with notions drawn from the new science. Their success was mixed. Peter Dickson describes the circumstances that culminated in the South Sea Bubble collapse in the early 1720s, and he attributed the general involvement in fraud and bribery to the encouragement of speculation and the belief that wealth was a measure of worth – a lack of principles that after the event and for a long time checked the activities of the capital enthusiasts.[99] Despite the fact that in theory money was no longer considered such a serious moral danger as the old theologians and natural lawyers had feared, in practice after the 1688 Revolution the sources show that it could easily get out of control.

11.2.2 The Right Stock-Jobbing

After 1688, all the fear in relation to interest on money displayed by some of the most pious and brilliant Reformers had vanished. But when usury was finally erased from official records none of the moral concerns with dishonesty disappeared with it. Science had taken over the money matters and the moment of explosion of the stock market had arrived and with it the possibilities of vice.[100] That wealth on a large scale for the nation ought not to come at the price of virtue was a mantra among the Whig politicians of the 1690s. 'God' was 'a God of reason', and so ought to be his creature when dealing with money and property, but virtuously.[101] Between

first Baron King Oates, 27 April 1702' in E. S. de Beer (ed.), *John Locke: Correspondence* (Oxford at the Clarendon Press, 1980), vol. VI, p. 611.

99 Dickson, *The Financial Revolution in England*, Chs. 5 and 6.

100 Dickson, *The Financial Revolution: A Study in the Development of Public Credit, 1688–1756*; Kleer, *Money, Politics and Power, Banking and Public Finance in Wartime England, 1694–96*; a helpful and detail view is provided in Giles Parkinson, *The London Stock Market in the 1690s* (MPhil, Cambridge University 2006).

101 John Houghton, for instance, was arguing that God would also agree with land enclosure due to its economic benefits, John Houghton, *England's great happiness, or a dialogue between Content and Complaint wherein is demonstrated that a great part or our complaints are causeless, and we have more wealth now, than ever we had at any time before the restauration of His Sacred Majestie* (London, 1677) Early English Books Online Text Creation Partnership 2011, http://name.umdl.umich.edu/A70268.0001.001; Wood, *John Locke and Agrarian Capitalism*, pp. 64–65.

good realism and naïveté, the new architects of the nation envisaged an unproblematic capacity of human reason to be both immersed in money business and above it. That was expressed at its best in their promotion of capital investments.

On 8 June 1694, John Houghton, publisher of a popular periodical, a weekly collection of letters for *Improvement of Husbandry and Trade*, considered that 'a little diversion from natural history' was proper and 'thought fit to treat of *joint-stocks*, and of the various dealings therein, commonly called *stock-jobbing*'.[102] Houghton's letters on stock-jobbing are a marvellous specimen of the style of the new science, combining both teaching of the truth, subtle moral instruction and warning to the well intended. Education, encouragement, exposition of what a worthy gentleman careful of the public interest would do, and the lengths to which a corrupt individual would go – all this was embodied in the letters designed to boost active economic participation and curb vicious economic practices through economic knowledge passed on by the printed press.[103] Houghton was a nationalist and an early convert to the happiness that luxury, consumption and market were able to impart, as trumpeted in his *England's Great Happiness* (1677).[104] His boldness was rewarded by prominence. However, other fellows of the Royal Society complained to Robert Boyle on account of Houghton's lack of moral substance in defending prodigality and luxury.[105] His letters on stock-jobbing show an altogether different style.

In his weekly letters, Houghton addressed a public composed of gentlemen, the middle class and traders, generally those interested in the new advances of science. On the strength of his periodicals, he has been considered important to the history of journalism and book-reviewing.[106]

[102] F.R.S., that is, Fellow of the Royal Society, accompanied the signature of Houghton's weekly letters, see John Houghton, *Husbandry and Trade Improved: Being a Collection of Many Valuable Materials relating to Corn, Cattle, Coals, Hops, Wool, etc*., Revised with a Preface by Richard Bradley, F.R.S. (Lyon, London: Printed for Wooman, 1777).

[103] See the many attempts in the same period to check economic vices through public measures in Davison, *Public Policy in an Age of Economic Expansion*.

[104] Houghton, *England's great happiness*; see specially, Paul Slack, 'The Politics of Consumption and England's Happiness in the Later Seventeenth Century' 122 *The English Historical Review* (2007); Joyce Appleby, 'Ideology and Theory: The Tension Between Political and Economic Liberalism in Seventeenth-Century England' *The American Historical Review* (1976).

[105] Slack writes that perhaps *England's Great Happines* earned him the Fellowship in the Royal Society; also the complaint of John Beale to Robert Boyle against Houghton's irreligious defence of luxury, in Slack, 'The Politics of Consumption', p. 613.

[106] See Roger Philip McCutcheon, 'John Houghton, a Seventeenth-Century Editor and Book-Reviewer', 20 *Modern Philology* (1923), pp. 255–260.

What he published amounted to efficient interventions in the education of the public on, among other matters, husbandry, general history, code-breaking, trade, banking, and as we will see next, stock-jobbing. Evidently, increasing knowledge for the good of the nation was his key concern.[107] Houghton was also extremely well connected, as shown by his numerous notes on discussions about books with specialists, for example on mathematics and theology. His relevance is also made clear by the fact that he had sponsored the admission to the Royal Society of none other than the Quaker William Penn (1644-1718), then a close friend of William Petty, Robert Boyle and John Locke. Penn was elected as a member *in absentia* on 2 November 1681. On that day Houghton presented the Society with a map of Pennsylvania in Penn's name.[108]

Houghton himself introduced his several letters on stock-jobbing as a defence of trade. The issue in question concerned explaining the mysteries of stocks and dispelling prejudices and false notions as being the only hindrances 'to a man's coming to the true knowledge of any thing'. He wrote that he personally did not trade in stock, but noted that Descartes had already suggested that without certainty no one ought to consider that they had achieved truth. It was proper therefore to examine and scrutinize the reason behind opinions with objectivity.[109] There had been 'some abuses', Houghton admitted, 'by traders', but that did not make the thing unlawful in itself. Was wine bad because some people did not know how to consume it? The 'Gentlemen' he knew, 'worthy persons of great honour and probity, who deal in stocks' had to suffer 'the censures of mankind, who inveigh against all traders and trading in stock', while those critics were generally ignorant about the matter. Therefore Houghton promised that starting in the next Friday's paper he would give an account of 'the original and *necessity* of joint-stocks', of 'the lawfulness and usefulness of trading therein', and also of its 'abuses'.[110] Notwithstanding this style of

[107] In a paper given at the Royal Society five years later, Houghton described 'the Political uses of Coffee' through a calculation of tons of consumption in each of the kingdoms. If the 70 tons of coffee consumed in England annually, at a cost of £14 a ton, were to be sold in coffee houses, this would result in employment for 6174 persons – since coffee houses made people 'sociable', facilitated trade and arts, and 'improved useful knowledge very much', meaning that that business represented a good source of employment. John Houghton F. R. S., 'A Discourse of Coffee, read at a Meeting of the Royal Society', 21 *Philosophical Transactions* (1699), pp. 311–317.

[108] On Houghton, Penn and his friends see Marion Balderston, 'The Mystery of William Penn, the Royal Society, and the First Map of Pennsylvania' 55 *Quaker History* (1966), pp. 79–87.

[109] Houghton, *Husbandry and Trade Improved*, p. 258.

[110] Houghton, *Husbandry and Trade Improved*, p. 260 (emphasis mine).

presentation, Houghton's subsequent letters contained not only a guide to stock-jobbing but a portrait of it, placing the investor in the wider context of the needs of the nation.[111] Stock-jobbing was necessary and lawful, but not *any* stock-jobbing – Houghton had no doubt that a distinction could be made between virtuous and vicious stock-jobbing, despite many and well-entrenched blunders in the system.

Houghton's nativist account of the history of stocks held that the trade was as old as the East India Company (i.e. it had been going on for almost a century), but the impetus recently observed was due to the war with France, which had obstructed maritime commerce. The business itself was explained by the fact that transferring stocks from one person to another was easier than investing money in land, houses or commodities, and because many took the view that money should not lay idle, despite its owner's lack of employment. 'This put them upon contrivances, whereby some were encouraged to buy, others to sell, and this is that is called *stock-jobbing*.'[112] Everything started with an invention, a discovery of a mine, a new trade that promised gain, but due to the amount of money needed or the hazard implied, it could not be done 'by a private purse'. The individual would then find 'some friends', who draft an agreement divide the shares. Everyone then would bring 'in his friends' and continue 'till all the shares be bought at such a price as stated'.[113] Houghton recommended paying down all the money immediately in view of the trouble caused when someone lagged in paying his quota. The organs of this new enterprise were a general court, composed of all the owners of the shares, a committee that would manage the whole, 'except ordering the raising or dividing of money' and usually a chairman, a treasurer and a clerk. They would meet either in houses established for the purpose, if they were big, or in particular coffee houses, 'where they may have some refreshment without great charge'.[114] The business to be done started when 'the monied man goes among the brokers', usually dwelling on the 'Exchange' or at 'Jonathan's coffee-house'. He would ask 'how stocks go'. With this 'information, (he) bids the broker to buy or sell so many shares of such and such

[111] I am borrowing here John Brewer's expression. Brewer referred to *The General Shop Book or Tradesman Universal Director* of mid eighteenth century that helped placing the small shopkeeper in the larger context of the British Empire, John Brewer, *The Sinews of Power: War, Money and the English State, 1688–1783* (Cambridge: Harvard University Press, 1988), p. 228.

[112] Houghton, *Husbandry and Trade Improved*, p. 261.

[113] Houghton, *Husbandry and Trade Improved*, p. 262.

[114] Houghton, *Husbandry and Trade Improved*, p. 263.

stocks' at certain prices, then he would mingle with the share owners or brokers to strike a bargain.[115]

On other occasions, he would ask what they will have for refuse of so many shares: that is, how many guineas a share he shall give for liberty to accept or refuse such shares, at such price, at any time within six months, or other time they shall agree for.[116]

Houghton also published an example of the type of contract used for that type of commitment to sell on demand and explained in detail what it meant in substance. It concerned the right to require the owner of a £75 share, for instance, that on receipt of a payment of three guineas, he or she would not sell it in the next three months. Price fluctuations would determine whether that owner lost or gained. If the share price rose substantially, whoever paid the three guineas would demand its acquisition and would have to pay only the original £75 for the share. Hence 'in plain English, one gives three guineas for all the profits if they should rise, the other for three guineas runs the hazard of all the loss if they should fall'.[117] Dealers might also make a profit by buying and selling shares in the same stock for different prices.

Another variation of the same idea of contracting on future handlings was 'putting', in which those who needed money would sell their shares in exchange for some form of security. For a certain price (e.g. a guinea and a half), they would agree to take the shares again at the same price for a certain period of time. The security of *putting upon* someone was the demand to buy again the shares he or she sold before. For the buyer, this type of transaction represented a means of obtaining profit, while for the seller it was a means of obtaining money immediately that he or she might need for other businesses. One ventured the guinea and a half and interest (dividend) on the share, hoping for profit; and the other, for the same sum, bore the risk that the shares would fall during the period that the security lasted, while being able to use the other's money in the meantime. 'Putting' functioned well in encouraging many people to buy in transactions whose success, as Houghton noted, was 'very uncertain'.[118] It was also employed in order to manipulate the prices of shares on the market, holding up shares for some time, and thus tempting others to buy, but without security. It was possible 'by the contrivances of a few men in confederacy' to have prices 'rise or fall', but, Houghton clarified,

[115] Houghton, *Husbandry and Trade Improved*, p. 264.
[116] Houghton, *Husbandry and Trade Improved*, p. 264.
[117] Houghton, *Husbandry and Trade Improved*, p. 265.
[118] Houghton, *Husbandry and Trade Improved*, p. 269.

https://doi.org/10.1017/9781009332149.013 Published online by Cambridge University Press

this could happen easily where small stocks were concerned, but not in relation to the bigger ones.[119]

Houghton also described 'the great mystery of all', or 'the mystery of buying more than all', which involved an intrigue to secure all the shares in a stock, and also to pay people who had no shares a sum in return for refusing offers to purchase them. 'Putting' and 'refusing' operated similarly with lottery tickets. Those who were to refuse offers would not imagine that the price would rise above the amount they had received, or they would think that they could buy from others before it did so. However, they could not, as under this scheme the closure of the sale period was arranged in advance. Once the price has risen,

> such takers of guineas for refuse as have no stock, must buy of the other that have, so many shares as they have taken guineas for the *refuse of*, at such rates as they or their friends will sell for tho' ten or twenty times the former price.[120]

Houghton's letters evidence that in the 1690s the rising stock market was causing the wider English public some apprehension. The whole point of his letters was to show the truth of stock-jobbing, and he did so. While it is clear that some of its mathematical secrets escaped him, the gist of stock-jobbing did not. His description vividly showed that it was about 'risk dealings' and the all too obvious uncertainty of the entire business, which was created not least by the uncertainty of human beings themselves – scoundrels, ruffians and villains were involved in stock-jobbing, Houghton explained, alongside numerous honest folk.

Houghton's letters are also indicative of an effort to teach the public that in the making of money one ought to remain virtuous and vigilant. Moreover, the system of stock-jobbing itself, with its aura of mystery, seemed to lend itself to vicious machinations and abuses. The dissemination of knowledge was the strategy followed by Houghton and his friends, with a view to disarming the evildoers by uncovering their mischievous methods. However, he concluded firmly that it was worth continuing with stock-jobbing and expanding it for the sake of the nation.

In his seventh and last letter on the question, Houghton highlighted particular companies that provided advantages to 'the nation' and in which it was worth investing.[121] He highlighted the profitability of companies

119 Houghton, *Husbandry and Trade Improved*, pp. 269–270.
120 Houghton, *Husbandry and Trade Improved*, p. 272.
121 Houghton, *Husbandry and Trade Improved*, p. 274.

involved in the following: glass bottles, japan (lacquers), sword blades (in Newcastle, but formerly imported from Holland and Germany), tapestries, copper and coal mines, 'night engines' (streetlights), firefighters, Greenland fishing, the trade of the Guinea company, leather from Turkey and Russia, 'lutestring' (silk clothes in the French style), all trade from India, (with the increasing of the city population), drinking water, paper, 'salt petre' and colonies such as New Jersey and Pennsylvania. In summary, companies were useful for the country, and Houghton concluded that 'if an hundred stocks more arise, we have no reason to be offended.'[122] His advice was that it was safer to confine one's investment activity to the big companies. But the truth is that the 'good' stock market of the great companies became highly exclusive by dint of the exorbitant price of a single share, which only the richest could afford.[123] Despite Houghton's instruction on stock-jobbing only a few, roughly 1 per cent of London's population at the time (above half a million inhabitants), would be capable of benefiting from the business honourably and with certainty, without involvement in the stock-jobbers' dubious schemes.[124] Thus access to virtue was open to the very rich, but not for everyone.

Houghton's seven letters on stock-jobbing did not stem merely from his private inspiration. They aligned with prevalent assumptions as to the ties between knowledge, profit and public good. Hence the course of action adopted by the government and parliament in the following decades entailed a series of bold measures by which to put greater quantities of private capital in motion with a view to facilitating rational public policies.[125] Interestingly, they also belong to a philosophical view on political economy that was definitively separated from theological discourse and based on notions of necessity developed by John Locke from the 1670s on, the techniques of which he had learned from his predecessors and placed in a new philosophical context. As argued in this chapter, what happened between the Reformers and Houghton, was Locke.

122 Houghton, *Husbandry and Trade Improved*, p. 276.

123 These companies with value £100.000 or more were the Bank of England, the White Paper, the East India and the Royal African Companies and the Orphan's Fund, Parkinson, *The London Stock Market in the 1690s*, p. 74; p. 158.

124 Giles Parkinson's study shows that only around five thousand investors at a time owned the capital of the biggest corporations that by 1697 composed 98% of the market index, from where I calculate the number of 1 per cent. Parkinson, *The London Stock Market in the 1690s*.

125 Brewer, *The Sinews of Power*, pp. 221–249.