

# *Philip I of England, embezzlement, and the quantity theory of money*<sup>1</sup>

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In 1975 Challis restated the case for a possible connection between Spanish bullion and rising prices in England during the second half of the sixteenth century. He suggested that ‘perhaps the pendulum has swung too far away’ from an older view which applied the quantity theory of money to explain the rise in Tudor prices, and that ‘if the debate over the significance of Spanish bullion is to be taken further . . . the contemporary record must be examined to see what support there is for the proposition that Spanish bullion did penetrate the later sixteenth-century economy’.<sup>2</sup> In light of his call for renewed scrutiny of the record, this article documents a hitherto unknown (and probably concealed) increase in the money supply which occurred in and around the year 1555. Its relationship to price inflation will also be considered.

In the weeks after the triumphal entry of King Philip the Brief of England into London in August 1554, the streets of his new capital were filled with hundreds if not thousands of Spaniards.<sup>3</sup> They had followed the heir to the Spanish kingdoms on his journey to England. There he was to marry Queen Mary, his close relative, and to take his place at her side on the Tudor throne. As one chronicler put it, there were ‘so many Spaniards in London that a man should have met in the streets for one Englishman above four Spaniards, to the great discomfort of the English nation’. Such were the crowds that even the halls of the livery companies were turned into temporary accommodation for the new king’s compatriots.<sup>4</sup> Yet, several weeks after Philip’s ceremonial entry, Londoners were still taken aback by some of the consequences of the alliance with Spain, which was widely regarded at the time as Europe’s wealthiest state. On 2 October 1554 a procession of carts trundled out of the royal compound in Westminster. Its destination was the Tower of London.

All the chroniclers regarded this episode as worthy of detailed comment. It was noted that the carts were heavily guarded by experienced soldiers selected from among the king’s Spanish troops. Henry Machyn reported that the wagons were filled with ‘wedges of gold and silver’.<sup>5</sup> According

<sup>1</sup> I wish to thank Dr Christopher Challis for his advice and encouragement, and also Prof. J.A. Guy, Mr Cliff Davies, and Dr Colin Phillips.

<sup>2</sup> Challis, ‘Spanish bullion and monetary inflation’.

<sup>3</sup> Philip was the son of the Emperor Charles V and heir to the thrones of Spain, the Netherlands, and Burgundy. His crown matrimonial in England lasted from his marriage to Mary I in July 1554 until her death in Nov. 1558; hence my choice of sobriquet, ‘the Brief’. For his role in England in 1554–8, see Redworth, ‘“Matters impertinent to women”’.

<sup>4</sup> Nichols, ed., *Chronicles*, p. 81.

<sup>5</sup> ‘veges of gold and sylver’: Nichols, ed., *Diary of Henry Machyn*, p. 69.

to the somewhat repetitious account by the martyrologist John Foxe, the bullion 'was matted about with mats, and mailed in little bundles about two feet long, and almost half a foot thick'. He thought there were six bundles in every cart; others counted differently, but all agreed that the total number of carts was 20. Foxe professed not to know why the bullion was being transported to the Tower: 'What it was indeed, God knoweth; for it is to us uncertain.'<sup>6</sup> This seems ingenuous. Since February of that year the Tower had housed the only mint operated in England by the Crown. It had required no great leap of imagination for Machyn to surmise that the bullion was to be coined. Queen Jane's chronicler was bolder still. He suggested that in 97 little chests there was enough silver to make £50,000 in sterling.<sup>7</sup>

What happened to the treasure once it disappeared into the Tower has remained a mystery until now. At the beginning of the twentieth century, Symonds took issue with the chroniclers by suggesting that the treasure may not have been entirely in the form of bullion. He argued that it could have included coins brought from Spain. The mint's own records showed that in March 1555 a quantity of Spanish coins had been reworked into English money, to the value of £17,592.<sup>8</sup> In 1970, Gould suggested (albeit erroneously) that the bullion formed part of Queen Mary's dower.<sup>9</sup> More recently, Challis has systematically challenged all these views. First he produced evidence to demonstrate that the reworking of Spanish coins was indeed the result of a shipment of mainly Spanish *reals* procured by Thomas Gresham. He had arranged for them to be directly imported from the Iberian peninsula and this was entirely unconnected with King Philip's treasure.<sup>10</sup> Challis suggested that it was therefore unlikely in the extreme that any of these reworked coins would have formed part of the bullion train witnessed by the chroniclers. As to what did happen to the king's treasure, Challis was to issue the following warning: 'the possibility should be borne in mind that the bullion was used to produce Spanish rather than English coin.' 'Such a suggestion', he concluded, 'is fully compatible with [other] contemporary evidence.'<sup>11</sup> This was a reference to the fact that alien coins (i.e. in foreign denominations, for use out of England) were indeed minted on Tower Hill at the king's command by Spanish technicians. At the start of Elizabeth's reign, the Privy Council sent a letter to the lieutenant of the Tower. The new queen's councillors instructed the lieutenant to permit Francisco de Lixalde, one of Philip's senior treasurers, 'to carry and convey out of the Tower at his pleasure certain ashes, irons, tools, and other instruments belonging to the said king and not the queen's majesty, as doth appear

<sup>6</sup> Foxe, *Acts and monuments*, VI, p. 560.

<sup>7</sup> Nichols, ed., *Chronicles*, p. 83.

<sup>8</sup> Symonds, 'Coinage of Mary Tudor', pp. 189-91.

<sup>9</sup> Gould, *Great debasement*, p. 55. Details of the queen's dower were specified in the marriage settlement.

<sup>10</sup> Challis, 'Spanish bullion and monetary inflation', p. 383; cf. Loades, *Reign of Mary Tudor*, pp. 150-5, 248.

<sup>11</sup> Challis, *Tudor coinage*, p. 113, n. 276; Symonds, 'Coinage of Mary Tudor', pp. 189-91.

by letters addressed unto Mr. Secretary Cecil from Stanley, the Comptroller of the Mint'.<sup>12</sup> Presumably these were the very tools used to coin much-needed Spanish *reals* for the war that Spain was waging against the French in and around the Low Countries.<sup>13</sup>

So, was the bullion taken into the Tower in October 1554 converted into pounds, shillings, and pence, or was it just made into coins for Philip's other realms and territories? The Archivo General de Simancas, the great repository of Habsburg family documents in northern Spain, contains hitherto uncited documents from the king's financial records. The first relevant document is the account rendered for audit in October 1556 by the king's personal treasurer, Domingo de Orbea.<sup>14</sup> Philip had by then already left England to visit the Habsburg territories in the Low Countries. It was therefore in the Flemish city of Ghent that Orbea stated in his account that, on 20 January 1555, the money from 'all the silver . . . which was worked and coined by his majesty's command in the Castle of London' had been handed over for the king's use. This amounted to £40,507 13s. 4d. '*de moneda esterlina*'—that is, in English coin. Orbea's statement makes it clear that the bullion in question was indeed silver which travelled under the care of Agustín de Zárate and Franciso Alvarez in the fleet which brought Philip to England in July 1554. The second document is a memorandum in English dated either 21 January or 21 February 1554/5. It was signed by one Thomas Egerton, who was undertreasurer of the mint, and in it he stated that the exact same sum of 'fortye thowsand fyve hondrett seven pounes tretyn shillinges, four pens' had already been handed over to Orbea as the king's treasurer, 'all charges being paid'.<sup>15</sup>

What were the charges that King Philip had to bear? Tackling this question will help to unlock the financial and legal ramifications surrounding what happened to the king's bullion. By probing the procedures under which the coins were accounted for, it will be possible to determine whether upwards of £40,000 must be added to the documented figures for the circulating medium of the time. To do this is hard. The official records of the mint make no direct mention of the coining. True, the records of the mint's production for the 1550s are notoriously scarce. In fact, only one ledger takes in Philip 1 & Mary 2, the regnal year which covers the period when the coins were minted. This is Undertreasurer Egerton's account of his activities from Christmas 1553 to Christmas 1555.<sup>16</sup> Egerton's account, submitted to specially appointed commissioners, itemizes and describes individual coinings in considerable detail. There is, for instance, a record of 'the gayne and proffyt comying

<sup>12</sup> *Acts of the Privy Council*, new ser., VII, 1558-70, p. 36.

<sup>13</sup> *Ibid.*, VI, 1556-8, p. 154; Challis, *Tudor coinage*, p. 117. See also Symonds, 'Coinage of Mary Tudor', p. 191, for the possible minting in the Tower of Netherlands gold crowns with Philip's English titles.

<sup>14</sup> For Orbea's account, see the translated extract in app. I.

<sup>15</sup> For this memorandum, see app. II. The abbreviation for the month is unclear.

<sup>16</sup> PRO, AO1/1670/497; hereafter cited as Egerton's account to distinguish it from his memorandum in app. II.

and growing by altering converting and coining of the equivalent of £17,735 18s. 10d. in 'Spanyshe money receyved ... of Thomas gressham the quenes agent in Flaunders'. This, he stated, was turned into exactly £17,592 in sterling. He duly accounted for the remains as well as his expenses. Despite this detail, there is no unequivocal reference to the coining of some £40,000 from bullion provided by King Philip.

Given that Egerton's account appears so comprehensive, it is striking that King Philip's English coins were not mentioned. The most conspiratorial solution would entail a concerted attempt, involving both monarchs, to conceal what might have been viewed as an abuse of power by a foreign-born king. This is unlikely for two reasons. First, no attempt had been made to draw attention away from the delivery of the bullion to the Tower. Second, and much more important, England lacked any domestic sources of gold and silver. As a result, it was habitual to lament the country's scarcity of coin and precious metals. For fear of impoverishing the realm, the marriage settlement expressly forbade Philip to take his wife's jewels out of the country. Consequently it is hard to believe that any gold or silver which Philip injected into the Tudor economy would not have been viewed positively by his new subjects as a most tangible benefit of an alliance with Europe's most bullion-rich country.<sup>17</sup>

## I

To understand the absence of any direct reference to the minting of the bullion, it is necessary to examine how the money was accounted for in the king's own records. Again, this is not straightforward. In fact, the way in which the king's officials in England accounted for the minting aroused the curiosity of the king's auditors in Ghent. In a marginal note to Orbea's submission, the officials in the Low Countries remarked in passing that they remained ignorant of the weight of the silver initially handed over, as well as of the weight after the process of minting.<sup>18</sup> Much of this confusion was doubtless due to the initial linguistic impasse between the officers of the mint and the king's Spanish treasurers. Egerton's memorandum was actually incorporated into a corrected set of accounts submitted by Zárate and Alvarez. As members of Philip's household, they were answerable to the Duke of Alva, who was *mayordomo mayor* or head of Philip's court and who accompanied his master to England.<sup>19</sup> Apparently, when Zárate and Alvarez first rendered account, they failed to include the costs of seigniorage and other related charges which 'Thomas Ayeton' (i.e. Undertreasurer Egerton) had levied on the king's money. This was a serious lapse, but they perhaps justifiably blamed it on a lack of experienced translators. In the revised accounts

<sup>17</sup> For the government's difficulties in procuring supplies of silver, see Challis, ed., *New history*, pp. 227-8, 235-6.

<sup>18</sup> See app. I.

<sup>19</sup> For his role, see Redworth and Checa, 'Courts of Spain'.

they itemized the consignments of silver which the king had turned over to the mint in a royal warrant or *cédula* dated 10 December 1554. Three separate entries were submitted to ducal scrutiny. First came the sum of £41,032 5s. 0d.; this, the largest sum, appears to have derived from the silver directly brought over by Philip from Spain. The second amount entered was £545 13s. 9d., which related to a smaller quantity of silver handed over on 24 October 1554 at the instance of Pedro de Hoyo, one of the king's secretaries. The final sum was a mere £17 5s. 6d., which was the amount produced—in this case with seigniorage already deducted—from half an ingot of silver. This half *riel* had been taken from one whole bar (marked as no. 200, incidentally) of the secretary's bullion. It was to be used in the assaying which would test the quality of the silver and its fitness to be turned into coin of the realm.<sup>20</sup>

The grand total of these three amounts came to £41,595 4s. 3d. Zárate and Alvarez then proceeded to list the charges to be set against this sum, these being the charges which previously they had failed to submit. From the first figure £997 5s. 2d. was deducted, and from the second £12 18s. 3d. (Nothing was included for the assayed silver, of course, since charges had already been deducted.) Seigniorage was reported as having being charged at the rate of 17½d. per lb. weight. After a further levy of £77 7s. 6d. was added for the costs of production (to be discussed below), the total deductions amounted to £1,087 10s. 11d. When subtracted from the grand total, the figure is £40,507 13s. 4d.—the exact amount which Thomas Egerton had literally handed over to Domingo de Orbea.

The charge of 17½d. per lb. weight in seigniorage provides the only clue to the procedures under which the coining took place. It indicates that King Philip's English coins were minted in accordance with an indenture drawn up on 20 August 1553.<sup>21</sup> In this agreement between the queen on the one hand, and Undertreasurer Egerton and his associates on the other, a fixed rate of 17½d. per lb. weight of silver was the level of potential profit demanded by the Crown. Most of the costs of production were to be met from this amount, but it was high enough for an element of seigniorial profit to be hoped for.<sup>22</sup> If, as is also likely, the other stipulations were carried out, then it should be assumed that the purity of the coin was as laid down in the agreement. From 11 oz. of silver out of the fire, £3 worth of coin (i.e. at face value) would be minted, but only after the admixture of 1 oz. of alloy. Indeed, it would have been very unlikely for King Philip's English coins to have varied from this high silver content. In England (if not in Ireland) Mary maintained a coinage of standard sterling, in line with the 11 oz. purity for silver currency as re-adopted towards the end of Edward VI's reign.<sup>23</sup>

<sup>20</sup> See Archivo General de Simancas, Contaduría Mayor de Cuentas, 1ª Epoca, Legajo 1345, fo. 6a.

<sup>21</sup> Symonds, 'Coinage of Mary Tudor', pp. 180-3; the original is PRO, E101 307/1.

<sup>22</sup> Although the Tudor documents sometimes referred to this charge as coinage, it is clearly a hybrid, since profit was expected. Hence, the term seigniorage is used in this article.

<sup>23</sup> In this context Challis has made a highly significant discovery. Despite assertions to the contrary, the silver content of Mary's English coins was always that of standard sterling. Harsh criticism of



When Queen Mary had sent her own gold to be specially minted, she had not been charged seigniorage.<sup>24</sup> Whether her husband should have been charged is constitutionally a moot point. What is not in doubt is that the procedure by which Philip was charged appears most irregular, if not downright dishonest. When Egerton referred in his memorandum to the fact that it was both 'the kinge and the quene majesties mynt', there may well have been more than a hint of irony. By breaking down the costs that were supposed to be met out of seigniorage at 17½d., it is possible to show the peculiar way in which the king was charged. Philip's coins were struck in an era of 'direct management' for the mint. Since 1544, the master-workers and the moneyers no longer charged the supplier of the bullion with their own costs and those of their workers. Instead, the Crown assumed responsibility for nearly all costs, and a hitherto unsalaried master-worker became the salaried undertreasurer and so on. In the words of Challis,

the Crown expected every single scrap of profit. The gross profit on each lb. of coin was fixed . . . and in addition the undertreasurer was to account for all profits which arose from buying bullion below the agreed price, from the accidental making of coins less in weight or in fineness than the agreed standard, from the grinding of the sweep of the melting houses, and so on.<sup>25</sup> No item was to be ignored. Even the proceeds from the sale of bark stripped from wood supplied to the mint were to be counted in.<sup>26</sup>

The agreement of August 1553 continued this policy by determining that out of a gross profit of 17½d. 'the charges shall be defrayed, the residue being paid to the Queen's use'.<sup>27</sup> The only exception to this was the wages of the moneyers who actually struck the coins. Strictly speaking, they were not employees of the mint but rather were subcontracted by it, in the same way as builders or carpenters who might be brought in as need arose.<sup>28</sup> This poses the question of why Egerton charged the king more than £77 for wood, coal, daily wages, tools, bellows, lead, the costs of melting and blanching, and more besides—charges which should have been paid out of seigniorage.<sup>29</sup>

It looks as if Egerton was defrauding, if not the Crown, then at least his king. Philip was being personally charged for expenses that the Exchequer required the undertreasurer to claw back out of the 17½d. in seigniorage. To see what Egerton should levy against seigniorage, we only have to look at his Account for 1553/5. He submitted as legitimate expenses the wages he had paid 'for the workmanship and coynage' of

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her coinage (especially in comparison with her sister's) has been based on a semantic misunderstanding between the purities out of the fire and at commixture; see Challis, ed., *New history*, pp. 263–6. An abnormally high standard of sterling was briefly adopted under Edward.

<sup>24</sup> For Mary's not paying the charges of seigniorage, see below, p. 254.

<sup>25</sup> Philip granted his own sweep; see below, app. III.

<sup>26</sup> Challis, ed., *New history*, p. 230; and see below, app. III.

<sup>27</sup> Symonds, 'Coinage of Mary Tudor', p. 181.

<sup>28</sup> Challis, 'Mint officials'; *idem*, ed., *New history*, p. 230; Craig, *Mint*, pp. 114–15.

<sup>29</sup> 'en los gastos de la madera y carbon y jornales de obreros y herramientas y fuelles y plomo y acendradas y jetas y otras muchas cosas y materiales'; see above, n. 20.

the moneyers and the costs incurred in procuring 'coles wood argall saltepetre and other necessities' for the mint's activities. Even if the charges which Egerton levied on Philip were for labour and costs legitimately incurred, it was the responsibility of the Crown (i.e. the Exchequer) to credit Egerton with these expenses—and if Philip were paying seigniorage then he was most certainly not the Crown, at least for the purposes of financial accounting. Before she married, Queen Mary had herself sent gold to the mint. Items worth in excess of £600 were handed over 'by the quenes majesties owne handes', apparently to be turned into angels to be used as touch-pieces for curing the inappropriately named 'king's evil'. The queen paid the costs of production, 'the chardges of coinage'; what she did not pay was a flat-rate levy of 17½d. for seigniorage.<sup>30</sup>

## II

What are the implications of what is now understood about the way in which King Philip's bullion was accounted for? There is the delightful possibility that an attempt was being made to swindle both the king and the Crown by an official who was no stranger to scandal. (A couple of years later, Egerton would indeed be dismissed from office and saddled with a gigantic debt for misappropriation of funds—involving imported Spanish coins.<sup>31</sup>) It appears that Egerton was consciously indulging in 'creative accounting' regarding the king's treasure in order to place himself in a position in which he might benefit personally from the confusion of the king's Spanish-speaking officials and the novel circumstances of a joint monarchy. Egerton took advantage of the joint monarchy's parallel systems of royal finance (the English and the Spanish) to charge the king with the costs of production as well as seigniorage, but without accounting for the latter to his English masters.

In the event of his being investigated, Egerton had also opened up several lines of defence. He could claim that his convoluted system of accounting was designed not to defraud but to adapt to a unique set of royal circumstances. He could try to talk his way out of any problems by arguing that he was trying to remain true to the detailed stipulations of the queen's indenture of August 1553. He could just as easily pretend that, by accounting to the king's own officials for seigniorage, he had been gallantly trying to avoid the indignity of subjecting his king's affairs to the direct scrutiny of the treasurer of the mint, Sir Edward Peckham. He could even try to claim that he was charging the king with the costs of production because that was how the queen had been treated with her angels. Most important of all, Egerton could claim that he had simply

<sup>30</sup> PRO, E351/2080, being Sir Edmund Peckham's Account as Treasurer of the Mint covering the period from 1 April 1552 to 13 May 1554. See also Symonds, 'Coinage of Mary Tudor', pp. 185-6; Farquhar, 'Royal charities', pp. 55-9.

<sup>31</sup> In Elizabeth's reign Egerton liked to claim that his disgrace was caused 'by the sinister solicitations of such as thirsted after his office and hated his religion': PRO, SP12/146, no. 57; *Acts of the Privy Council*, new ser., V, 1554-6, pp. 210, 300; Challis, *Tudor coinage*, pp. 112, 114-15.

not known what to do, pointing in his defence to the fact that there were records in existence both of his charges and of the deduction of seigniorage. This much was true, but only in the Spanish records and not in the documents furnished to the English Exchequer. Egerton had indeed left a paper trail which provided sufficient information for all the king's charges to be called to account and for any unnecessary payments to be refunded. But the point remains that although he had accounted for his doings, his record was not in the most obvious of places.

There is further support for the argument that we are dealing with a form of accounting which combined transparency with a potential to mislead. It is possible to adduce a single and oblique reference in the English records to the coining of 'the kinges majesties bullion', in Egerton's own account for 1553/5. Its solitary appearance makes sense only if Egerton was trying to swindle the mint. First, it is necessary to establish what Egerton meant by 'the king's bullion'. Since this account seems to make a clear distinction between the coining of that and the recoining of the Spanish monies supplied by Gresham which was discussed earlier, there is a strong possibility that this is the sole reference to the treasure that entered the Tower of London in October 1554.<sup>32</sup> Egerton demanded almost £71

for money by hym deburced and paid for the saide diett curceased within the saide tymes by occasion of dyvers Spanyardes attendinge the mynt from tyme to tyme during the coyninge of the kinges majesties bullion appointed so to be by the kinges majesties commaundement by theym declared to the officers of the mynt.

Here Egerton may be claiming expenses for certain Spanish officials in relation to an operation partially accounted for elsewhere. This could be read as a further indication that there are two legitimate processes in question, rather than just one; of course, it may simply have been infeasible to avoid some overlapping between the two accounts, especially if the costs of feeding the officials of the mint were not available at the time at which the king's money was handed over. A more sinister motive is possible. It is no less likely that Egerton was concerned to provide further cover for himself, should he ever be challenged regarding the improvised nature of the way in which he had accounted for the king's bullion. This may be why he went out of his way to record precisely how the order to coin the king's silver came down the chain of command. In the absence of any written instruction in English, the royal command that the Spaniards be present, it was alleged, was 'by theym declared' to officers of the mint. The absence of a formal order was irregular, and this comment could provide Egerton with documentary proof in the

<sup>32</sup> See Egerton's account. The passage also refers to the expenses of Messrs. Brock, Rogers, and Holt, 'working in the Tower in making certayne devyses for coyninge of moneys and repaying to dyet with the officers of the mynt and also by other occasyons in receipt of the Spanyshe moneys *above charged*'. It should be noted that the passage in italics is a reference to the Spanish coins obtained by Gresham, as this (and not the king's bullion) was accounted for in Egerton's balance. The undertreasurer claimed a total of £70 18s. 3d., and no breakdown was supplied.



English records that nefarious accounting had never been further from his mind.

To conclude this section, if what is in question is a parallel and deliberately convoluted line of accounting, this explains why no unequivocal reference to the money coined for King Philip is to be found in the account Egerton rendered for 1553/5. What remains unclear is whether the profits of coinage ever made their way into the nation's coffers or whether they remained firmly in the pockets of Egerton and his friends. The balance of probability is that the king and the Crown were victims of embezzlement.

### III

Next to be considered are the consequences for the money supply of the striking of good-quality silver on such a large scale. Two questions immediately arise. By how much did the circulating medium increase, and, second, did the money move expeditiously into the financial system? Simply by posing these questions we are straining at the limits of what we know about the sixteenth-century economy; any answers must perforce be highly impressionistic. We can begin with one certainty, the ends to which the king's money was intended. In his memorandum, Egerton casually remarked that it was for 'the kynges maiesties usse'. Orbea's submission clarifies this statement. He was accounting for 'the costs and expenses of his majesty's household and other matters regarding his service'.<sup>33</sup> In a grant which the king made on 17 February 1555 to three serving men in his retinue, the same reason appears. They were to have the rights to 'the sweep of the silver which has been minted in the Tower of London for the costs of my household'.<sup>34</sup>

The coining of the king's bullion must be seen against the background of a desperate need for cash. According to the marriage settlement agreed with Mary, Philip 'was to receive and admit into the service of his household and court gentlemen and yeomen of the said realm of England in convenient number'.<sup>35</sup> On his arrival the new king was shocked to discover not only that his English subjects had provided him with a *duplicate* household to complement the one he had brought with him from Spain, but also that he was expected to foot the bill himself.<sup>36</sup> Philip's expenses went beyond the underwriting of the daily running costs of two courts. Soon after his arrival he wisely confirmed 21 pensions to influential Englishmen and later conceded still more. It has been calculated that these alone amounted to over £5,600 per year.<sup>37</sup> In other words, Philip had to pay for many hundreds of noble guests and hangers-

<sup>33</sup> 'para los gastos y espensas de la casa de su magestad y otras cosas de su seruicio'; the reference is given in app. I.

<sup>34</sup> 'relaues o deshecho de la scouilla de la plata que se ha labrado en la torre de londres para el gasto de mi casa'; see app. III.

<sup>35</sup> See Hughes and Larkin, eds., *Tudor royal proclamations*, II, pp. 24-5.

<sup>36</sup> Loades, *Reign of Mary Tudor*, pp. 93, 158.

<sup>37</sup> *Idem*, 'Philip II', pp. 182-3.

on, as well as two sets of household servants who had to be fed, housed, clothed, as well as having their wages paid and being given a 'foreign travel' allowance. Also to be considered were the expenses of his guards (Spanish as well as English) and of all the singers, musicians, and clerics of his chapel. His salaried household alone is estimated to have included about 1,000 Spanish and 300 English servants.<sup>38</sup> Little wonder that in April 1555 Domingo de Orbea let it be known at Charles V's court that Philip was so strapped for cash that it was hard to find the money to feed the king and his servants. Doubtless these were exaggerations designed to speed up a much-needed loan that Philip was seeking from his father, but they contain more than a kernel of truth. In other words, it is quite possible that the king's £40,000 in sterling silver currency was promptly dispersed into the English economy.<sup>39</sup> Orbea overspent that year by at least a figure close to 40 million maravedís—not far off what was reckoned to be the value in maravedís of the king's English coins.<sup>40</sup>

Table 1. *Documented output of coin, 1551-1556*

	Gold	Unrevised silver	Revised silver	Unrevised total	Revised total
<i>Michaelmas</i> 1551-July 1553	£21,153 0 0	£124,179 17 6	n/a	£145,332 17 6	n/a
July 1553- July 1556	£78,634 10 0	£216,459 5 0	£256,966 18 4	£295,093 15 0	£335,601 8 4
<i>Combined total</i> 1551-1556	£99,787 10 0	£340,639 2 6	£381,146 15 10	£440,426 12 6	£480,934 5 10

Sources: see text

Quite how much the king's coins amounted to in terms of the mint's overall output is difficult to reckon. Table 1 revises the estimated production of coin in the mid-Tudor period, taking into account the bullion coined for King Philip.<sup>41</sup> To the figures calculated by Challis, I have opted to add only the £40,507 13s. 4d. that was actually handed over to Orbea and omit the £1,087 10s. 11d. in charges. Though the revised account of Zárate and Alvarez states that this sum was also struck, it seems preferable to be cautious in estimating the totals involved. The revised figures appreciably alter our knowledge of the documented levels of money in circulation. Looking more closely at the period from 1551, when high-quality silver was once again minted after years of debasement, to 1556, the total output of silver coin during those years has to be recalculated to show an increase of at least 12 per cent. When gold coin

<sup>38</sup> See Calvete de Estrella, *El felicísimo viaje*, p. 1xxiv. For lists of names, see Martínez Millán, ed., *La corte de Carlos V*.

<sup>39</sup> See the letter, probably from Eraso, the emperor's financial secretary, closed on 12 April 1555, in *Calendar of State Papers, Spanish*, XIII, p. 159.

<sup>40</sup> See Archivo General de Simancas, Contaduría Mayor de Cuentas, 1ª Epoca, Leg. 1345, fo. 84c; the year's household expenditure was originally calculated at over 313,772,707 maravedís. Receipts (including the English coin) came only to fractionally over 274,921,006 maravedís. As shown in app. I, Philip's English coin was reckoned at somewhat under 51 million maravedís.

<sup>41</sup> See Challis and Harrison, 'Contemporary estimate', esp. p. 831.

is included, the total output of new coin increases by some 9 per cent. If the focus is on only the first three years of Mary's reign, the increase in production is obviously bigger. The output of silver coin goes up by almost 16 per cent, with the total output for gold and silver increasing by just over 12 per cent.

Of course, the most important recalculation is concerned not with levels of production but with the total amount of coin in circulation at the time. Arriving at such a figure is highly problematic. It requires an extrapolation backwards from what was already an estimate given by Challis for September 1560, almost two years into Elizabeth's reign. Bearing in mind all the pitfalls (and for the time being still excluding King Philip's bullion), it may tentatively be suggested that at the end of Philip and Mary's reign in November 1558, there was a circulating medium of some £1,655,000.<sup>42</sup> (This comprised £571,000 in good gold and silver, along with an additional £1,084,000 in older debased currency.<sup>43</sup>) Since all the silver coin minted when Mary was on the throne appears to have been of high quality (Irish coins excepted), the amount of good coin in the economy when the king's £40,500 is included should now be recalculated to about £611,500 in round figures, out of a new grand total of £1,695,500 for all coins in circulation at the end of the joint reign. In other words, whereas King Philip's bullion may have increased the overall documented circulating medium (including debased coinage) during the joint reign only by slightly under 2.5 per cent, in terms of sound money alone, there was probably a relatively abrupt increase of 7 per cent.

#### IV

In the article which prompted this research, Challis quoted from a distinguished historian of an earlier generation who held 'that it is undoubtedly true that the gold and silver which poured into Europe from Peru and Mexico were largely responsible for the steady rise in prices'.<sup>44</sup> Only further investigation, Challis wrote, would settle the matter. Evidence of a possibly swift and not unremarkable increase in the money supply has here been presented for 1555. But what did happen to prices around this time? According to the Phelps Brown-Hopkins index, the composite unit of consumables increased dramatically between 1555 and 1556 from 270 to 370. This was a rise without parallel, at least in early modern history.<sup>45</sup> It is possible that—on this occasion at least—the money

<sup>42</sup> This figure includes the activities of the mint from 1557 onwards.

<sup>43</sup> This figure is reached by taking the sum of £1,711,000 given by Challis for Sept. 1560 and deducting the £56,000 in good gold and silver coin which is known to have been minted at the start of Elizabeth's reign. See Challis, *Tudor coinage*, esp. pp. 244-6.

<sup>44</sup> Challis, 'Spanish bullion and monetary inflation'.

<sup>45</sup> Phelps Brown and Hopkins, 'Seven centuries', app. B, pp. 38-41. Taking the years 1451-71 = 100, the index figure for 1554 is 276, for 1555, 270, for 1556, 370, for 1557, 409, and for 1558, 230. Confirmation of this leap in prices is to be found in Hoskins, *Age of plunder*, app. III, esp. p. 248. Since Hoskins takes Phelps Brown's harvest year of 1555 as 1554 and so on, the corresponding rises according to Hoskins are (for all grains) 340 for 1554 and 521 for 1555, and (for arable crops) 268 for 1554 and 330 for 1555.

supply was a contributory factor in the recorded movement of prices. Of course, there were other related monetary factors. Who is to say that during King Philip's first year of residence the real 'Spanish influence' on prices was not the unsatisfied demand for lodgings? The same might be said for the consumption of food or for the supplying of luxury goods. Of course, the most important factor in the increase in prices at this time was that the harvest of 1555 was the first in a pair of agricultural disasters which, unusually it seems, affected prices dramatically.<sup>46</sup> Since the speed at which money could enter and affect an economy remains a puzzle today, it is necessary to be exceptionally cautious when dealing with a period during which the money of account included tokens and the like, as well as coin of the realm.

In the introduction to his collection of essays on the Tudor price revolution, Ramsey suggested that in its classic formulation the quantity theory of money was 'a tautology'.<sup>47</sup> It is a sobering fact that, even when new statistical information is unearthed, it remains extremely difficult to separate monetary factors from real ones. Certainly the growth documented here could not be by any stretch of the imagination account for the price rises of 1555/6. All that can be said is that an increase in the quantity of money in circulation may well have had a role to play alongside harvest failure and other more important real factors. In that sense, monetary factors in mid-Tudor inflation appear less a tautology and more an article of faith.

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#### APPENDIX I: *Orbea's Account of October 1556*

Translation of extract from Domingo de Orbea's Account of the king's household expenses for 1555, audited in Ghent on 8 October 1556 before the king's Treasurers-in-Chief, Archivo General de Simancas, Contaduría Mayor de Cuentas, 1<sup>a</sup> Epoca, Legajo 1345, fo. 8a

##### Account

First, account is rendered to the said treasurer for forty thousand five-hundred-and-seven pounds thirteen shillings and four pennies in sterling from the silver which, by his majesty's command, was coined in the Castle [i.e. Tower] of London in the said year of 1555, from the silver in Auditor Agustín de Zárate's care in the fleet in which his royal majesty passed from Spain to England in the year 1554, as appears in the certified account that was made in the city of London on 20 of January of the said year 1555; signed by the said Auditor Zárate and Francisco Alvarez, assayer, who came with the said silver as assayer by order of his majesty from the city of Seville, and that the said pounds sterling, when turned into Castilian maravedís at a rate of six-and-a-half pence in sterling for one real of Castile, being its value and correct exchange in England, do

<sup>46</sup> Wrigley and Schofield, *Population history of England*, esp. p. 414; whereas Fisher estimated that there was a 20% population decline in 1555-60, Wrigley and Schofield suggest a drop of 5.5%. See also Moore, 'Visitation revisited'; Zell, 'Fisher's 'flu'; Moore, 'Virus still virulent'.

<sup>47</sup> Ramsey, *Price revolution*, p. 6.

make fifty million eight-hundred-and-fifty-two thousand seven hundred and one maravedís and seven thirteenthths of a maravedí.

*Extract from marginal comments to the above*

Checked against the original account submitted by Agustín de Zárate, Francisco Alvarez and Francisco de Lexalde, by his majesty's commission, of the money which came from all the silver in the said Zárate's care which was worked and coined by his majesty's command in the Castle of London, against which are set off one thousand and eighty-seven pounds and 10 pennies in sterling money of the said account or costings for working the said silver; in the said account it is not clearly shown what was the quantity of silver involved nor the quantity remaining after processing, and that this calculation into Castilian maravedís is made at the rate of 1,245 maravedís 5/13ths for each pound sterling.

## APPENDIX II: *Egerton's Memorandum*, fo. 6d of the document cited above<sup>48</sup>

Memorandum that I Thomas Egerton unthetresorer of the kinge and the quene majesties mynt have received to the kynges maiesties usse so moche sterling Syllver as doithe amount all charges being paid fortye thowsand fyve hondrett seven poundes tretyn shillinges four pens<sup>49</sup> of the wiche some I have paid to domyngo de orbya per the handes of Frances de Salldo as by our accomptes maye apper within lyttyll mour or lasse this xxj of jenerell/feverell<sup>50</sup> anno 1554

40507.13.4<sup>51</sup>

By me Thomas Egerton

## APPENDIX III: *Grant of the sweep*, fo. 7a of the document cited above The King-Prince

Domingo de Orbea, my treasurer, and auditor Agustín de Zárate: As by these presents indicated, I have granted in equal parts to Gaspar de Fuensalida and Flores Dublet of my chamber, and to Domingo Deola Barria, assistant in my bakehouse, the wash and remains from the sweep of the silver worked in the Tower of London for my Household expenses, taken from that which you, the said auditor, brought from Spain in the fleet wherein my royal person passed into this realm. I order you to hand over the sweep to whomsoever they name, as they see fit, to do with it whatsoever they wish, and I release you from any charge or blame which might be imputed to you. London, 18 February 1555.

*The King-Prince*

By order of his majesty

Pedro de Hoyo

Your majesty grants to Gaspar and Flores and Domingo Deola Barria all the

<sup>48</sup> Abbreviations have been silently extended throughout.

<sup>49</sup> The original amount of 6s. 6d. was overwritten. See below, n. 51.

<sup>50</sup> It is unclear whether January or February is meant. Although 'Feverell' [for February] seems the more attested form, 21 January may be the more probable date (because Egerton's memorandum refers to monies already handed over and, as app. I makes clear, that transfer took place on 20 January 1555).

<sup>51</sup> The original reference was to 6s. 6d., before this was amended to 13s. 4d.



wash and remains of the sweep of the silver which has been worked in the Tower of London.<sup>52</sup>

<sup>52</sup> The recipients obtained the sweep on 24 March 1555 (fo. 7b).

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