
DEBATES

Once More Unto the Breach

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The editor of this journal graciously granted me space to reply to a piece by Nathan Sussman published earlier, and at the same time, granted Professor Sussman an opportunity to respond to my reply.¹ Normally, I would have allowed the controversy to die a natural death at that point, but I have found Professor Sussman's response deeply disturbing for a variety of reasons. In my view, it is apparent that he has: attacked my work without, in fact, reading it; misstated my methods, my arguments, and my conclusions; displayed unfamiliarity with certain source materials; neglected the broader historical context; failed to provide a sufficient scholarly apparatus to allow others to check his work; and finally, used modern statistical methods in a manner that is at once flawed and spurious in its claim to precision. Legitimate doubt and difference of opinion are certainly possible, indeed commendable, given late medieval sources, but the flaws in Professor Sussman's work, in my view, transgress acceptable limits.

In discussing the double counting of coinage documents, Professor Sussman dismisses the problem lightly in observing that most duplicates "can be readily identified due to their identical dates".² In *Money and Power in Fifteenth Century France*, I discussed the problem of double counting, pointing out that the stages of authorizing an issue, fabricating it, sending samples to the assay, opening the assay box, prosecuting fraud, etc. all left records of the same coinage issue at different dates.³ I did not claim completeness of the surviving

¹ Sussman, N., "Missing Bullion or Missing Documents: A Revision and Reappraisal of French Minting Statistics: 1385-1415", *Journal of European Economic History*, XIX (1990) 677-81; H. Miskimin, "Missing Bullion or missing Documents: A Rejoinder", *Journal of European Economic History*, XX (1991) 673-75; N. Sussman, "A Reply", *Journal of European Economic History*, XX (1991) 677-81.

² Sussman, «Reply», p. 677.

³ Miskimin, H., *Money and Power in Fifteenth Century France*, New Haven, Yale University Press, 1984, pp. 32-34.

records, but suggested that such multiple documentation reduced the chances that an issue of coinage would be altogether lost from the historical record. Subsequent pages continue discussion of lacunae in the records and note documents such as the royal instructions of 1431 that mention 21 mint towns when only eight have left records and when one of these was not included in the original list.⁴

Acknowledging such flaws and problems, I maintained that the series of mint records give a "substantially accurate picture of French coinage output during the fifteenth century".⁵ I did not intend to imply absolute perfection and total completeness, but rather that the general picture revealed by the documents was correct.

That said, let us turn to more substantive matters. Professor Sussman discovered some additional documents relating to the coinage of the Dauphiné from 1384 to 1415. We concur on their usefulness, but disagree on their relative importance in the context of late medieval European monetary history. His conclusions were threefold: 1. that previous assertions that the documents were complete were mistaken; 2. that the variability of the new data reveal the dangers of extrapolation from regional data to the aggregate French level; 3. that the data used to support the bullion famine overrepresented the Dauphiné region.⁶ It should be evident from the foregoing and from my published work that no claim was set forth regarding the completeness of the mint documents. I most certainly agree with Professor Sussman's concern about the dangers of extrapolating from regional data to the aggregate French level, but remain perplexed when he does just that in his subsequent "Reply".⁷ Finally, my efforts were always to find records for all of France; the fact that Dauphiné coinage weighs more heavily in the records for this period simple reflects the documentation. During the years in question — 1384-1415 — my series includes evidence for silver from the non-Dauphinois mints of Angers, Dijon, La Rochelle, Limoges, Macon, Montpellier, Paris, Poitiers, Rouen, St. André, St. Lo, St. Menehould, St. Pourçain, Toulouse, Tournai, Tours, and Troyes. For gold, the non-Dauphinois mints represented are: Dijon, Macon, Montpellier, Paris, St. André, St. Lo, St. Pourçain, St. Quentin, Toulouse, Tours, and Troyes. Documents may well have been lost, yet the fact that the coinage from these mints, frequently major cities, is in sum so slight relative to that from the Dauphiné would seem to confirm rather than challenge the notion of a bullion famine in France.

When Professor Sussman stressed — overstressed in my view — the importance of the additional coinage that he documented from 1384 to 1415, I sought to put his total increment into the context of the bullion famine

⁴ *Ibid.* pp. 35-38.

⁵ *Ibid.*, p. 38.

⁶ Sussman, "Missing Bullion", p. 161.

⁷ Sussman, "Reply", pp. 679-81.

hypothesis noting that his finding for “nearly a third of a century adds as much silver and half as much gold to the previous total as was struck in France in the single year 1339”.⁸ I also noted that because the general levels of coinage were very low during these years of bullion famine, his additions assumed a considerable but perhaps undue percentage importance. At this juncture, Professor Sussman cried foul and accused me of comparing apples (the coinage of the Dauphiné) with oranges (the coinage of all of France). One can but be bemused in recalling that Professor Sussman in his original piece wrote that his “findings and conclusions... suggest a reconsideration of the bullion ‘famine’ and the monetary explanation of the depression of late medieval Western Europe.”⁹ That is quite a claim for his apples.

In order to proceed to a consideration of Professor Sussman’s criticism of my version of the bullion famine hypothesis, it is necessary to indulge in a small digression to set forth that hypothesis accurately. Throughout my work, I have argued that coinage levels in various portions of northwest Europe — most notably England and France but also Spain and Flanders — declined after the Black Death and successor plagues as a result of certain structural dislocations induced by fear, military exigency, and depopulation.¹⁰ In general, I considered the periods before and after roughly 1360 for comparison. In the case of England where the records are remarkably well-preserved, we may compare the silver coinage output from 1273 to 1322 taken as 100, with the century from 1363-1464 when the index falls to 3.81, a 96.19% decline sustained over slightly more than one hundred years.¹¹ I also argued that in the period prior to about 1384, coinage peaks seemed to alternate among France, Flanders, and England so as to suggest that the same metal was being struck over and over again.¹² Such a pattern of alternation implies that when coinage levels were high in one region and low in the others, the cause was the physical absence of bullion in the latter and not just the result of missing documents. It is a pattern that confirms my view that the mint documents while not perfect, do in fact reflect reality. As the fourteenth century wore on, the pattern diverged as coin levels in all three regions declined and bullion seems to have left the system.

⁸ Miskimin, “Rejoinder”, p. 675. In 1339, French mints coined 24,128 kilograms of silver and 6,326.1 kilograms of gold. For the years 1384-1415, Professor Sussman supplements my figures by an additional 24,453.7 kilograms of silver and 3,641.0 kilograms of gold.

⁹ Sussman, “Missing Bullion”, p. 161.

¹⁰ Miskimin, H., “Monetary Movements and Market Structure: Forces for Contraction in Fourteenth and Fifteenth Century England”, *The Journal of Economic History*, XXIV (1964) 470-90.

¹¹ *Ibid.*, p. 477, author’s note.

¹² Miskimin, H., *Money, Prices and Foreign Exchange in Fourteenth Century France*, New Haven, Yale University Press, 1963, pp. 100-16 and “Le Problème de l’argent au Moyen Age”, *Annales: économiques, sociétés, civilisations*, XVII (1962) 1125-30.

In describing the bullion famine and considering its causes, I did not describe it as a sudden catastrophic event but as a continuous process. Structural changes in the economy — falling grain prices, rising manufactured and luxury goods prices — caused by depopulation conjoined with papal remittances, ransom payments, and military expenditures to drain bullion from the west. Since the drain was ongoing, we need not be alarmed when sporadic periods of greatly elevated coinage appear during the fifteenth century, particularly when they are cotemporal with periods of military crisis. The elevated French coinages in the years from 1415 to 1430 or so were indeed impressive, but they resulted from political crisis in the person of Henry V and his dual invasions of Normandy.¹³

Elsewhere I have discussed the role of military exigency in forcing metal to the mints and incorporated that pressure as one of the factors contributing to the bullion famine. Hoards were melted down to pay for war, ransoms, bribes, etc. In 1412, bribes from the French to buy off Clarence included jewels, treasure, holy relics, and the gold cross of Ourges which was believed to contain a nail from the Crucifixion.¹⁴ The elevated French coinages of the years from Agincourt to the burning of Jeanne d'Arc appear to be the result of a last ditch effort to mobilize all remaining monetary resources. I noted that once coined, this metal was exposed to export and loss due to the same factors that had already drained much of the monetary resources of France and northwestern Europe. I would also point out that the coinages of these years were small in comparison with those associated with Philip the Fair's wars in Flanders and Aquitaine or the military disasters during the reign of Jean le Bon.

We are now prepared to address Professor Sussman's substantive argument. He is quite correct in stating that I replied to his initial article by noting that the new mint output that he documented for a 32 year period is trivial in comparison to the single year 1339. Our agreement stops there. In order to attack my work, *he chose* the years 1308-43 for comparison with the years 1384-1419. His statement that I compare "mint outputs recorded during years of debasement with (his) figures" is simply without basis in fact.¹⁵ I compared his tables to one year, 1339, when almost all of the recorded coinage was struck at the rate of six livres to the marc, the same rate as in the previous year. The one exception was in fact stronger coin, struck at the rate of 4.29 livres to the marc in the spring of 1339.¹⁶

In his initial article, Professor Sussman limited himself to the years 1384-1415, yet in his "Reply" he has added four more years so as to continue the series to 1419. The additional years, flatteringly enough, depend entirely

¹³ Miskimin, H., *Money and Power*, pp. 43-53 and "L'Or, l'argent, la guerre dans la France médiévale", *Annales: économies, sociétés, civilisations*, XL (1985) 171-84.

¹⁴ Miskimin, *Money and Power*, p. 51.

¹⁵ Sussman, "Reply", p. 679.

¹⁶ Miskimin, *Money, Prices*, pp. 166-68.

upon my research as he acknowledges but cites erroneously.¹⁷ He states that he supplemented his series with my totals for these years in order to overcome the effects of debasements which were designed to "provide an incentive to increase the supply of bullion to the mint".¹⁸ I have elsewhere presented sound statistical evidence indicating that debasement was essentially a last resort, that little coinage was struck during the worst debasements, and that debasement generally failed to attract extant coin or metal to the mints.¹⁹ Furthermore, the years added by Professor Sussman were not years of peak debasement. For gold, the worst debasement of the fifteenth century occurred in 1420 and for silver in 1422. Mint outputs in each case peaked three years earlier than the debasements; for gold in 1417 and for silver in 1419.²⁰ If he were truly endeavouring to take debasement into account, Professor Sussman should have extended his series further. Why did he pick precisely the years 1416-19? Could it be that these years represent the greatest mint productions of the entire fifteenth century? In these four years, French mints coined 3212.7 kilograms of fine gold and 39,041.7 kilograms of fine silver. Since Professor Sussman's figures for all of France in the thirty-two years 1384-1415 are 11,696.8 kilograms of gold and 72,072.4 kilograms of silver, the addition of my figures for these four years would raise his totals for gold by 27.5% and for silver by 54.2%.²¹ The simple incorporation of my figures into Professor Sussman's series would increase the mean annual silver coinage from 2252.2 kilograms for his average 1384-1415 to 3086.5 for the extended period 1384-1419. The increment is no small advantage for Professor Sussman since he seeks to prove that the mean in the latter period is as great or greater than that in the early fourteenth century.

¹⁷ Miskimin, *Money and Power*, pp. 135-36. Sussman's citation to Table IV is incorrect; it should be to Table III or Table VI. It is perhaps not inappropriate to mention here a similar problem in Professor Sussman's original "Missing Bullion" article. In his Tables I and II (pp. 152-53), he compares my tables of coinage outputs with some attributed to De Saulcy. There is no reference to the location of De Saulcy's purported tables. This does not surprise me because I do not believe such tables or series in fact exist. In explaining disparities between my tables and the non-existent ones of De Saulcy, Professor Sussman ("Missing Bullion", p. 148, note 2) says that "Saulcy refers to the minting of 1920 kilograms of pure silver in Tournai - this information does not appear in Miskimin (1964)". The reference in question is a document (A.N. Z 1^b 1) dated 10 and 16 January 1386 (1387 n.s.) punishing the guards of the Tournai mint for delivering a box of underweight coin and not a regular mint production document. There is no way of knowing when the coin was in fact struck or even if it was struck and released. Since the document lay outside the normal mint records and lacked internal consistency concerning the degree of weight shortfall, I did not include it in the series though a reference should perhaps have been given.

¹⁸ Sussman "Reply", p. 679.

¹⁹ Miskimin, *Money, Prices*, pp. 62-64; *Money and Power*, pp. 54-63.

²⁰ Miskimin, *Money and Power*, p. 59.

²¹ Sussman, "Missing Bullion", pp. 152-53.

The alert reader, however, will have noted that these mean output levels are in fact far smaller than those offered by Professor Sussman. This is due to the fact that his figures are not drawn from historical documents; they are constructs of his own devising. He asserts that "numismatic evidence shows that the share of Dauphiné coins in hoards found in France ranges from 10% to 19% in the period 1389-1411, and 1% to 9% for the period 1411-17".²² His footnote advises us that his "estimate is calculated on the basis of hoards found in France and reported in the *Revue Numismatique* since the 1920s".²³ The reader is sent off to consult the last seventy-two issues of the *Revue*. The absence of an adequate scholarly apparatus is more than discourteous. It precludes serious discussion of the issues raised. How many hoards? From what period precisely? Since the coins themselves bore no dates, what chance is there of using coin finds to compare mint outputs from Dauphiné with those from France from any given year? What sort of accidents contributed to the formation of hoards? What is the likelihood that they constitute a random sample of the totality of French mint outputs? Without addressing such problems and without granting his audience proper access to his sources, Professor Sussman chooses two values, 10% and 20%, as the possible degree of representation of Dauphiné coinage in the French total coinage.²⁴ He then, if I have understood correctly, simply multiplies his totals for the Dauphiné by five or ten to obtain his estimates for all of France. These are figures that he presents for statistical comparison with those that I have drawn from the documents themselves.

Professor Sussman has inflated his initial series by the incorporation and addition of the years 1416-19, years of heavy dishoarding under military pressure. He has then increased that augmented total by a factor of five based on dubious evidence from unspecified coin finds. One would think that these activities would have satisfied his need to bias artificially the case in his favour. One would be wrong.

Some decades ago, I called attention to the importance of the mint profit records published by Robert Fawtier as the *Comptes du trésor*.²⁵ More recently, I again published a cautious estimation of their value in filling in the gaps in the surviving coinage documents and sought to convert profit figures into rough estimates of mint output levels.²⁶ Profit figures within the period 1308-43, that chosen by Professor Sussman, are available for the years 1322, 1323, 1324, 1325, 1327, 1328, 1329 and 1330. For whatever reason, Professor Sussman has

²² *Ibid.*, p. 151.

²³ *Idem.*

²⁴ Sussman, "Reply", p. 680.

²⁵ Fawtier, R., *Comptes du trésor (1296, 1316, 1384, 1477)*, Paris, 1930; J.B. Henneman *Royal Taxation in Fourteenth Century France*, Princeton, Princeton University Press, 1971, p. 348; and Miskimin, *Money, Prices*, pp. 42-44.

²⁶ Miskimin, "L'Or, l'argent, la guerre dans la France médiévale", *Annales: économies, sociétés, civilisations*, XL (1985) 171-84.

entirely neglected to make any reference to these figures. I have and would continue to urge caution regarding conversions from mint profits to actual coinage production, but if my estimates are roughly correct, the profits for the years in question suggest that an additional 114,092 kilograms of silver were struck. This addition more than doubles the level of recorded mint output in the absence of the profit estimates. Let us now recall that my characterization of the bullion famine was predicated on comparison of the periods before and after about 1360 and not on the years selected by Professor Sussman. Once again, we may be informed by profit figures from the French mints - this time for the years 1296, 1298, 1299, 1301, and 1349. These were all years of extraordinarily large profits and thus presumably of very large coinages. The profit levels suggest direct coinage of approximately 222,557 kilograms of silver during these five years. The actual mint records for the years 1350-60 record the coinage of an additional 123,427.4 kilograms of silver. If we combine this sum, the mint record totals for 1308-43, and the profit estimated starting in 1296, we arrive at a total of 559,995.9 kilograms of silver. For a variety of reasons, I believe that the mean annual coinage is not a very useful concept, but for the sake of argument, I note that the mean that results from these figures is 81.3% higher than that attributed to me by Professor Sussman.

If Professor Sussman overlooked my concern with the profit figures when they benefited my case, he also overlooked them when they damaged his. The mint profits for the year 1408, one included in his series, are minuscule, and while I have accepted his discovery of new output documents, the low profit figures caution against inflating the total French coinage by means of the artificial contrivances that he proposes. Again available in 1477, the profit figures reveal that of thirty-three mints mentioned only one, Lyon, generated profits.²⁷ The total profit in that year was a mere 160 livres parisis — a number entirely consistent with bullion famine.

In summing up, Professor Sussman says: "comparing minting data from the alleged bullion famine period with the data pertaining to the first half of the fourteenth century, I have clearly demonstrated, using a statistical test, that a French bullion famine hypothesis is not validated by the evidence".²⁸ The test in question is the null hypothesis based on the Student *t* distribution for small samples. For such a test to be valid, the standard deviations of the two populations should be equal.²⁹ Professor Sussman does not provide evidence that this condition has been met. In calculating the standard deviation for the years 1308-43 based on my figures and thus available to me, I did find that for the eleven numbers employed in my critic's test, the standard deviation was

²⁷ Miskimin, *Money and Power*, p. 53. The reader's attention is directed to the caveats regarding this procedure expressed in this book.

²⁸ Sussman, "Reply", p. 681.

²⁹ Freund, J.E. and G.A. Simon, *Modern Elementary Statistics*, 8th ed., Englewood Cliffs, Prentice Hall, 1992, pp. 324-25.

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greater than the mean. With very small sample size and enormous standard deviations, the null hypothesis test could not reject the hypothesis that an elephant is a mouse. It is best then to reject the test in this instance for the statistical dead end that it is. This is particularly so when, as is the case here, Professor Sussman has artificially inflated his coinage estimates and lessened mine. Statistical method lends only a spurious precision to his assault. The evidence of the times, the data from other countries than France, the views of contemporaries, the expressed rationale for mercantilist proscriptions against the church, Italian merchants, consumers of luxury goods, and foreign travellers all support my position that the bullion famine was a pressing reality in the later middle ages. So, too, in my view, do the coinage statistics when read without bias.