8 October 2010

John Munro's chief contributions to the historical literature on late-medieval and early-modern European economic history

Major fields of research and publications: monetary, price, and wage history; international trade; textile history; and most recently finance, including public finance.

(1) **In monetary and price history, I have contributed to the so-called 'monetarist' debate about the late-medieval economic contraction or 'Great Depression' and the related debate about the 'bullion famine' of the later Middle Ages.**

In this debate, my arguments to a considerable extent support the 'negative' and 'monetarist' views of John Day and Peter Spufford (opposing those of Carlo Cipolla and his student Nathan Sussman). But while the other two have focused on a quantity theory of money, and in particular on the supposed outflows of bullion to the Islamic world (the Levant in particular), I have focused much more on the changes in the income velocity of money and what is known as the Cambridge Cash Balances approach; and I contend that supplies a better understanding of the fluctuating cycles of monetary expansion and contraction in later medieval Europe. I have also demonstrated (so I believe, successfully) that the proof of those periodic monetary contractions lie in the correspondingly periodic deflations, which I also demonstrate – contrary to the standard literature – cannot be explained by demographic or other real forces.

My chief publications in this field have been:

Monetary Contraction and Industrial Change in the Late-Medieval Low Countries, 1335 - 1500', in Nicholas Mayhew, ed., *Coinage in the Low Countries, 880 - 1500: The Third Oxford Symposium on Coinage and Monetary History* British Archeological Reports, International Series No. 54 (Oxford: Ashmolean Museum, 1979), pp. 95-161.

'Mint Policies, Ratios, and Outputs in England and the Low Countries, 1335-1420: Some Reflections on New Data', *The Numismatic Chronicle*, 141 (1981), 71-116. [formerly listed as: 8th series, Vol. I]; reprinted in John Munro, *Bullion Flows and Monetary Policies in England and the Low Countries, 1350 - 1500*, Variorum Collected Studies series CS 355 (Aldershot, Hampshire; and Brookfield, Vermont: Ashgate Publishing Ltd., 1992).

'Bullion Flows and Monetary Contraction in Late-Medieval England and the Low Countries', in John F. Richards, ed., *Precious Metals in the Later Medieval and Early Modern Worlds* (Durham, North Carolina: Carolina Academic Press, 1983), pp. 97-158; reprinted in John Munro, *Bullion Flows and Monetary Policies in England and the Low Countries, 1350 - 1500*, Variorum Collected Studies series CS 355 (Aldershot, Hampshire; and Brookfield, Vermont: Ashgate Publishing Ltd., 1992).

'Monnayage, monnaies de compte, et mutations monétaires au Brabant à la fin du moyen âge', in John Day, ed., *Études d'histoire monétaire, XIIe - XIXe siècles*, Études de l'Université de Paris VII et du Centre National des Lettres (Lille: Presses Universitaires de Lille, 1984), pp. 263-94; reprinted in John Munro, *Bullion Flows and Monetary Policies in England and the Low Countries, 1350 - 1500*, Variorum Collected Studies series CS 355 (Aldershot, Hampshire; and Brookfield, Vermont: Ashgate Publishing Ltd., 1992).

'Mint Outputs, Money, and Prices in Late-Medieval England and the Low Countries', in Eddy Van Cauwenberghe and Franz Irsigler, eds., *Münzprägung, Geldumlauf und Wechselkurse/ Minting, Monetary Circulation and Exchange Rates*, Trierer Historische Forschungen, 7: *Akten des 8th International Economic*

History Congress, Section C-7, Budapest 1982 (Trier: University Press, 1984), pp. 31-122.
'Deflation and the Petty Coinage Problem in the Late-Medieval Economy: The Case of Flanders, 1334 - 1484', *Explorations in Economic History*, 25:4 (October 1988), 387-423; reprinted in John Munro, *Bullion Flows and Monetary Policies in England and the Low Countries, 1350 - 1500*, Variorum Collected Studies series CS 355 (Aldershot, Hampshire; and Brookfield, Vermont: Ashgate Publishing Ltd., 1992).

'The Central European Mining Boom, Mint Outputs, and Prices in the Low Countries and England, 1450 - 1550', in Eddy H.G. Van Cauwenberghe, ed., *Money, Coins, and Commerce: Essays in the Monetary History of Asia and Europe (From Antiquity to Modern Times)*, Studies in Social and Economic History (Leuven: Leuven University Press, 1991), pp. 119 - 83.

'A Maze of Medieval Monetary Metrology: Determining Mint Weights in Flanders, France and England from the Economics of Counterfeiting, 1388 - 1469', *The Journal of European Economic History*, 29:1 (Spring 2000), 173-99.

'Gold, Guilds, and Government: The Impact of Monetary and Labour Policies on the Flemish Cloth Industry, 1390-1435', *Jaarboek voor middeleeuwsche geschiedenis*, 5 (2002), 153 - 205.

'Money, Wages, and Real Incomes in the Age of Erasmus: The Purchasing Power of Coins and of Building Craftsmen's Wages in England and the Southern Low Countries, 1500 - 1540', in Alexander Dalzell and Charles G. Nauert, Jr., eds., *The Collected Works of Erasmus: The Correspondence of Erasmus*, Vol. 12: *Letters 1658 - 1801, January 1526-March 1527* (Toronto: University of Toronto Press, 2003), Appendix: pp. 551-699.

'The Monetary Origins of the "Price Revolution:" South German Silver Mining, Merchant-Banking, and Venetian Commerce, 1470-1540', in Dennis Flynn, Arturo Giráldez, and Richard von Glahn, eds., *Global Connections and Monetary History, 1470 - 1800* (Aldershot and Brookfield, Vt: Ashgate Publishing, 2003), pp. 1-34.

'The Price Revolution', in Steven N. Durlauf and Lawrence E. Blume, eds., *The New Palgrave Dictionary of Economics*, 2nd edition, 6 vols. (London and New York: Palgrave Macmillan, 2008), vol. 6, pp. 631-34.

'Money, Prices, Wages, and "Profit Inflation" in Spain, the Southern Netherlands, and England during the Price Revolution era: ca. 1520 - ca. 1650', *História e Economia: Revista Interdisciplinar*, 4:1 (2008), 13-71.

'Before and After the Black Death: Money, Prices, and Wages in Fourteenth-Century England', in Troels Dahlerup and Per Ingesman, eds., *New Approaches to the History of Late Medieval and Early Modern Europe: Selected Proceedings of Two International Conferences at The Royal Danish Academy of Sciences and Letters in Copenhagen in 1997 and 1999,* Historisk-filosofiske Meddelelser, no. 104 (Copenhagen: The Royal Danish Academy of Sciences and Letters, 2009), pp. 335-364.

'Coinage Debasements in Burgundian Flanders, 1384 - 1482: Monetary or Fiscal Policies?' in David Nicholas, James Murray, and Bernard Bacharach, eds., *Comparative Perspectives on History and Historians: Essays in Memory of Bryce Lyon (1920-2007)* (Kalamazoo, MI: Medieval Institute Publications, 2011): in press.

'The Late-Medieval Decline of English Demesne Agriculture: Demographic, Monetary, and Political-Fiscal Factor', in Stephen Rigby and Mark Bailey, eds., *Town and Countryside in the Age of the Black Death:*

Essays in Honour of John Hatcher, The Medieval Countryside, vol. 5 (Turnhout: Brepols, 2012): in press.

(2) **A related theme, pertaining now to early-modern European economic history, has been to demonstrate that the origins and development of the European Price Revolution, ca. 1520 - ca. 1640, were indeed fundamentally monetary, and not demographic.** From the 16th century itself, the quantity theory of money had long prevailed in that explanation, in the form of the influx of Spanish American treasure, an idea most forcibly presented in the early to mid 20th century by Earl Hamilton of Chicago. But after World War II, the demographic school became predominant – and, demonstrating that inflation had begun by 1520, some forty years before significant influxes of Spanish American silver arrived in Europe, they therefore deduced – wrongly, and with bad economics – that population growth was responsible, indeed solely responsible. My work has pointed out that (a) demographic recovery, from very low levels, did not commence in NW Europe until the 1520s, and thus could have immediately produced inflation (not when the population of England and Wales in 1523 was 2.25 million, compared to at least 4.5 million in 1300); and I further demonstrated (b) that dramatic monetary expansion had taken place before the onset of inflation, in two forms: (i) the South German Central European silver-copper mining boom, from the 1460s, peaking in the 1530s (producing far more silver than would arrive from the Americas before the 1570s); and (ii) a veritable financial revolution in negotiability of both private commercial bills and government *rentes* and other debt instruments. At the same time, despite the preeminence of monetary factors, a wide variety of real factors, including demographic, profoundly in influenced changes in both relative prices and the price level (inflation, with deflation after the 1650s).

My chief publications in this field have been:

'The International Law Merchant and the Evolution of Negotiable Credit in Late-Medieval England and the Low Countries', in Dino Puncuh, ed., *Banchi pubblici, banchi privati e monti di pietà nell'Europa preindustriale: amministrazione, tecniche operative e ruoli economici*, *Atti della Società Ligure di Storia Patria*, Nouva Serie, Vol. XXXI (Genoa: Società Ligure di Storia Patria, 1991), pp. 49 - 80; reprinted in John Munro, *Textiles, Towns, and Trade: Essays in the Economic History of Late-Medieval England and the Low Countries*, Variorum Collected Studies series CS 442 (Aldershot, Hampshire; and Brookfield, Vermont: Ashgate Publishing Ltd., 1994).

'The Central European Mining Boom, Mint Outputs, and Prices in the Low Countries and England, 1450 - 1550', in Eddy H.G. Van Cauwenberghe, ed., *Money, Coins, and Commerce: Essays in the Monetary History of Asia and Europe (From Antiquity to Modern Times)*, Studies in Social and Economic History (Leuven: Leuven University Press, 1991), pp. 119 - 83.

'Patterns of Trade, Money, and Credit', in James Tracy, Thomas Brady Jr., and Heiko Oberman, eds., *Handbook of European History in the Later Middle Ages, Renaissance and Reformation, 1400 - 1600*, Vol. I: *Structures and Assertions* (Leiden: E.J. Brill, 1994), pp. 147-95.

'Precious Metals and the Origins of the Price Revolution Reconsidered: The *Conjuncture* of Monetary and Real Forces in the European Inflation of the Early to Mid-Sixteenth Century', in Clara Eugenia Núñez, ed., *Monetary History in Global Perspective, 1500 - 1808*, Proceedings of the Twelfth International Economic History Congress at Madrid, August 1998 (Seville, 1998), pp. 35-50.

'English "Backwardness" and Financial Innovations in Commerce with the Low Countries, 14th to 16th centuries', in Peter Stabel, Bruno Blondé, and Anke Greve, eds., *International Trade in the Low Countries*

(14th - 16th Centuries): Merchants, Organisation, Infrastructure, Studies in Urban, Social, Economic, and Political History of the Medieval and Early Modern Low Countries (Marc Boone, general editor), no. 10 (Leuven-Apeldoorn: Garant, 2000), pp. 105-67.

'The Monetary Origins of the "Price Revolution:" South German Silver Mining, Merchant-Banking, and Venetian Commerce, 1470-1540', in Dennis Flynn, Arturo Giráldez, and Richard von Glahn, eds., *Global Connections and Monetary History, 1470 - 1800* (Aldershot and Brookfield, Vt: Ashgate Publishing, 2003), pp. 1-34.

'Inflation', in Jonathan Dewald, et al, eds., *Europe 1450 to 1789: Encyclopedia of the Early Modern World* (New York: Charles Scribner's Sons/The Gale Group, 2004), Vol. 3, pp. 262-265.

'Money and Coinage: Western Europe', in Jonathan Dewald, et al, eds., *The Dictionary of Early Modern Europe, 1450 - 1789* (New York: Charles Scribner's Sons/The Gale Group, 2004), Vol. 4, pp. 174-184.

'The Price Revolution', in Steven N. Durlauf and Lawrence E. Blume, eds., *The New Palgrave Dictionary of Economics*, 2nd edition, 6 vols. (London and New York: Palgrave Macmillan, forthcoming).

'Money, Prices, Wages, and "Profit Inflation" in Spain, the Southern Netherlands, and England during the Price Revolution era: ca. 1520 - ca. 1650', *História e Economia: Revista Interdisciplinar*, 4:1 (2008), 13-71.

(3) **Another related theme, related in particular to theme no. one, and by far the most controversial, concerns the debate about rising real wages and real incomes after the Black Death.** The profession – both in terms of economic history and economics itself – almost universally proclaims a Ricardian model: that the drastic alteration in the land:labour ratio, with the rapid fall in population after the Black Death, must have raised the marginal productivity of labour and thus real wages (while lowering incomes from rents and profits from agricultural land). While pointing that the true formula in Classical Economics is the relationship between the marginal *revenue* product of labour and the real wage, I have further demonstrated with (I believe) irrefutable statistical evidence for both England and the Low Countries that:

(i) real wages fell, not rose, after the Black Death, and remained below the level attained as a peak in the 1330s until the late 1370s in England, and the 1390s in Flanders.

(ii) the sustained rise in real wages that thereafter ensued, reaching their peak in both England and the Low Countries in the 1460s, was due primarily to the combination of institutional wage-stickiness – that prevented nominal money wages from falling – and widespread deflation. Thus those with the same money wages became far better off with the fall in their cost of living.

Conversely, and for the subsequent Price Revolution era, I have demonstrated that the fall in real wages was not due (or not so much due) to population growth as to the fact that consumer prices, with general infaltion, rose so much more than did nominal money wages.

My chief publications in this field:

'Wage Stickiness, Monetary Changes, and Real Incomes in Late-Medieval England and the Low Countries, 1300 - 1500: Did Money Matter?' *Research in Economic History*, 21 (2003), 185 - 297.

‘Money, Wages, and Real Incomes in the Age of Erasmus: The Purchasing Power of Coins and of Building Craftsmen’s Wages in England and the Southern Low Countries, 1500 - 1540’, in Alexander Dalzell and Charles G. Nauert, Jr., eds., *The Correspondence of Erasmus*, Vol. 12: *Letters 1658 - 1801, January 1526-March 1527* (Toronto: University of Toronto Press, 2003), Appendix: pp. 551-699.

‘Builders’ Wages in Southern England and the Southern Low Countries, 1346 -1500: A Comparative Study of Trends in and Levels of Real Incomes’, in Simonetta Caviococchi, ed., *L’Edilizia prima della rivoluzione industriale, secc. XIII-XVIII*, Atti delle “Settimana di Studi” e altri convegni, no. 36, Istituto Internazionale di Storia Economica “Francesco Datini” (Florence, 2005), pp.1013-76.

‘Before and After the Black Death: Money, Prices, and Wages in Fourteenth-Century England’, in Troels Dahlerup and Per Ingesman, eds., *New Approaches to the History of Late Medieval and Early Modern Europe: Selected Proceedings of Two International Conferences at The Royal Danish Academy of Sciences and Letters in Copenhagen in 1997 and 1999*, Historisk-filosofiske Meddelelser, no. 104 (Copenhagen: The Royal Danish Academy of Sciences and Letters, 2009), pp. 335-364. [also listed above]

‘The Usury Doctrine and Urban Public Finances in Late-Medieval Flanders (1220 - 1550): Rentes (Annuities), Excise Taxes, and Income Transfers from the Poor to the Rich’, in Simonetta Cavaciocchi, ed., *La fiscalità nell’economia Europea, secc. XIII - XVIII/ Fiscal Systems in the European Economy from the 13th to the 18th Centuries*, Atti della ‘Trentanovesima Settimana di Studi’, 22 - 26 aprile 2007, Fondazione Istituto Internazionale di Storia Economica “F. Datini”, Prato, Serie II: Atti delle “Settimane de Studi” et altri Convegni 39 (Florence: Firenze University Press, 2008), pp. 973-1026.

[This study is discussed below, in the context of another of my historical themes: the origins of the modern Financial Revolution]

A related, but earlier publication, to be cited is:

‘Urban Wage Structures in Late-Medieval England and the Low Countries: Work-Time and Seasonal Wages’, in Ian Blanchard, ed., *Labour and Leisure in Historical Perspective, Thirteenth to Twentieth Centuries*, Vierteljahrschrift für Sozial- und Wirtschaftsgeschichte Beiheft series, no. 116 (Stuttgart: Franz Steiner Verlag, 1994), pp. 65-78.

‘The Late-Medieval Decline of English Demesne Agriculture: Demographic, Monetary, and Political-Fiscal Factors’, in Stephen Rigby and Mark Bailey, eds., *Town and Countryside in the Age of the Black Death: Essays in Honour of John Hatcher*, The Medieval Countryside, vol. 5 (Turnhout: Brepols, 2012): in press.

(4) **Perhaps my major academic contribution has been to offer a fundamentally new interpretation of the medieval history of international trade – particularly the international trade in textiles, and thus also a reinterpretation of the history of the textile industries in both the Low Countries and England, which, however, are also related to monetary history (naturally) and public finance.**

My two basic arguments have been:

(a) That the spreading stain of chronic, debilitating, every more costly warfare (and civil strife) throughout the entire Mediterranean basin – in the Western Christian, Byzantine, and Islamic worlds – led to such an increase in both transportation and more generally transaction costs (including protection costs) that: (i) international trade in cheaper textiles, especially those produced by *price takers* in NW Europe, and exported to the Mediterranean, became unprofitable, indeed quite economic, thus leading to the almost complete disappearance of such northern textiles in the Mediterranean basin, and thus to the virtual disappearance of these cheaper-line textile industries in NW Europe;

(b) and that consequently northern textile producers were forced to re-orient production for export markets to far higher value luxury fabrics, to become *price makers* engaged in monopolistic competition, and thus to produce such woollens completely from the higher grades of English wools, the fundamental requirement for luxury cloths, with wools that were the best in the world, before the improvement of Spanish *merino* wools in the later 15th and 16th centuries

(c) That increased dependence on the finer English wools encouraged the English crown to levy increasingly burdensome export taxes and other fiscal-monetary impositions on the wool trade, which inadvertently led to the rise of the English woollen broadcloth trade (displacing the lighter, cheaper worsteds), whose expansion ultimately crushed the luxury textile industries in the Low Countries, northern France, and Italy – though the victory took a century to achieve as the rival draperies in the Low Countries and Italy (Florence) staved off extinction by convincing the European markets of superior quality, when quality competition prevailed over price competition.

(d) I finally argue that the Low Countries, obeying the Law of Comparative Advantage, survived industrially by switching back to the cheaper, lighter worsted style fabrics, but succeeded only when structural changes in international trade once again lowered transportation and transaction costs to promote a revival and growth in the cheaper-line fabrics (again principally direct to Mediterranean and now New World markets).

My chief publications (of many) are as follows, omitting the earlier ones that were published before I fully formulated these hypotheses

‘Industrial Protectionism in Medieval Flanders: Urban or National?’ in Harry Miskimin, David Herlihy, and A. L. Udovitch, eds., *The Medieval City* (New Haven and London: Yale University Press, 1977), pp. 229-68; reprinted in John Munro, *Textiles, Towns, and Trade: Essays in the Economic History of Late-Medieval England and the Low Countries*, Variorum Collected Studies series CS 442 (Aldershot, Hampshire; and Brookfield, Vermont: Ashgate Publishing Ltd., 1994).

‘Wool-Price Schedules and the Qualities of English Wools in the Later Middle Ages, ca. 1270 - 1499’, *Textile History*, 9 (1978), 118-69; reprinted in John Munro, *Textiles, Towns, and Trade: Essays in the Economic History of Late-Medieval England and the Low Countries*, Variorum Collected Studies series CS 442 (Aldershot, Hampshire; and Brookfield, Vermont: Ashgate Publishing Ltd., 1994).

‘The 1357 Wool-Price Schedule and the Decline of Yorkshire Wool Values’, *Textile History*, 10 (1979), 211-19; reprinted in John Munro, *Textiles, Towns, and Trade: Essays in the Economic History of Late-Medieval England and the Low Countries*, Variorum Collected Studies series CS 442 (Aldershot, Hampshire; and Brookfield, Vermont: Ashgate Publishing Ltd., 1994).

‘Economic Depression and the Arts in the Fifteenth-Century Low Countries’, *Renaissance and Reformation*, 19 (1983), 235-50; reprinted in John Munro, *Textiles, Towns, and Trade: Essays in the Economic History of Late-Medieval England and the Low Countries*, Variorum Collected Studies series CS 442 (Aldershot, Hampshire; and Brookfield, Vermont: Ashgate Publishing Ltd., 1994).

‘The Medieval Scarlet and the Economics of Sartorial Splendour’, in Negley B. Harte and Kenneth G. Ponting, eds., *Cloth and Clothing in Medieval Europe: Essays in Memory of Professor E. M. Carus-Wilson*, Pasold Studies in Textile History No. 2 (London: The Pasold Research Fund and Heinemann Educational Books, 1983), pp. 13-70; reprinted in John Munro, *Textiles, Towns, and Trade: Essays in the Economic History of Late-Medieval England and the Low Countries*, Variorum Collected Studies series CS 442 (Aldershot, Hampshire; and Brookfield, Vermont: Ashgate Publishing Ltd., 1994).

‘Urban Regulation and Monopolistic Competition in the Textile Industries of the Late-Medieval Low Countries’, in Erik Aerts and John Munro, eds., *Textiles of the Low Countries in European Economic History*, Studies in Social and Economic History, Vol. 19 (Leuven: Leuven University Press, 1990), pp. 41 - 52; reprinted in John Munro, *Textiles, Towns, and Trade: Essays in the Economic History of Late-Medieval England and the Low Countries*, Variorum Collected Studies series CS 442 (Aldershot, Hampshire; and Brookfield, Vermont: Ashgate Publishing Ltd., 1994).

‘Industrial Transformations in the North-West European Textile Trades, c. 1290 - c. 1340: Economic Progress or Economic Crisis?’ in Bruce M. S. Campbell, ed., *Before the Black Death: Studies in the ‘Crisis’ of the Early Fourteenth Century* (Manchester and New York: Manchester University Press, 1991), pp. 110 - 48. Reprinted by Manchester University Press in a paper-back edition in 1992; and reprinted in John Munro, *Textiles, Towns, and Trade: Essays in the Economic History of Late-Medieval England and the Low Countries*, Variorum Collected Studies series CS 442 (Aldershot, Hampshire; and Brookfield, Vermont: Ashgate Publishing Ltd., 1994).

‘Industrial Entrepreneurship in the Late-Medieval Low Countries: Urban Draperies, Fullers, and the Art of Survival’, in Paul Klep and Eddy Van Cauwenberghe, eds., *Entrepreneurship and the Transformation of the Economy (10th - 20th Centuries): Essays in Honour of Herman Van der Wee* (Leuven: Leuven University Press, 1994), pp. 377-88.

‘Anglo-Flemish Competition in the International Cloth Trade, 1340 - 1520’, *Publication du centre européen d’études bourguigonnes*, 35 (1995), 37-60 [*Rencontres d'Oxford (septembre 1994): L’Angleterre et les pays bas bourguignonnes: relations et comparaisons, XVe - XVIe siècle*, ed. Jean- Marie Cauchies.]
‘The Origins of the English ‘New Draperies’: The Resurrection of an Old Flemish Industry, 1270 - 1570’, in Negley B. Harte, ed., *The New Draperies in the Low Countries and England, 1300 - 1800*, Pasold Studies in Textile History no. 10 (Oxford and New York: Oxford University Press, 1997), pp. 35-127.

‘Textiles as Articles of Consumption in Flemish Towns, 1330 - 1575’, *Bijdragen tot de geschiedenis*, 81:1-3 (1998), 275-88. With a Dutch summary.

‘The Symbiosis of Towns and Textiles: Urban Institutions and the Changing Fortunes of Cloth Manufacturing in the Low Countries and England, 1270 - 1570’, *The Journal of Early Modern History: Contacts, Comparisons, Contrasts*, 3:1 (February 1999), 1-74.

‘The “Industrial Crisis” of the English Textile Towns, 1290 - 1330’, *Thirteenth-Century England:* VII, ed. Michael Prestwich, Richard Britnell, and Robin Frame (Woodbridge, UK: Boydell Academic Press, 1999), pp. 103-41.

‘The Low Countries’ Export Trade in Textiles with the Mediterranean Basin, 1200-1600: A Cost-Benefit Analysis of Comparative Advantages in Overland and Maritime Trade Routes’, *The International Journal of Maritime History*, 11:2 (Dec. 1999), 1 - 30.

‘The “New Institutional Economics” and the Changing Fortunes of Fairs in Medieval and Early Modern Europe: the Textile Trades, Warfare, and Transaction Costs’, *Vierteljahrschrift für Sozial- und Wirtschaftsgeschichte*, 88:1 (2001), 1 - 47.

‘Gold, Guilds, and Government: The Impact of Monetary and Labour Policies on the Flemish Cloth Industry, 1390-1435’, *Jaarboek voor middeleeuwsche geschiedenis*, 5 (2002), 153 - 205. [Also cited above]

‘Medieval Woollens: Textiles, Textile Technology, and Industrial Organisation, c. 800 - 1500’, in David Jenkins, ed., *The Cambridge History of Western Textiles*, 2 vols. (Cambridge and New York: Cambridge University Press, 2003), Vol. I, chapter 4, pp. 181-227.

‘Medieval Woollens: The Western European Woollen Industries and their Struggles for International Markets, c.1000 - 1500’, in David Jenkins, ed., *The Cambridge History of Western Textiles*, 2 vols. (Cambridge and New York: Cambridge University Press, 2003), Vol. I, chapter 5, pp. 228-324, 378-86 (bibliography).

and also:

Herman Van der Wee (in collaboration with John Munro), ‘The Western European Woollen Industries, 1500 - 1750’, in David Jenkins, ed., *The Cambridge History of Western Textiles*, 2 vols. (Cambridge and New York: Cambridge University Press, 2003), Vol. I, chapter eight, pp. 397- 472.

‘Manufacturing and Industry’, in William Chester Jordan, ed., *Dictionary of the Middle Ages: Supplement 1* (New York: Charles Scribner's Sons, 2004), pp. 345-55.

‘Spanish *Merino* Wools and the *Nouvelles Draperies*: an Industrial Transformation in the Late-Medieval Low Countries’, *Economic History Review*, 2nd ser., 58:3 (August 2005), 431-84.

‘Textile Production for the Market’, in Margaret Schaus, ed., *Women and Gender in Medieval Europe: An Encyclopedia* (New York and London: Routledge, 2006), pp. 791-95.

‘The Anti-Red Shift – to the Dark Side: Colour Changes in Flemish Luxury Woollens, 1300 - 1550’, *Medieval Clothing and Textiles*, 3 (2007), 55-95.

‘South German Silver, European Textiles, and Venetian Trade with the Levant and Ottoman Empire, c. 1370 to c. 1720: A Non-Mercantilist Approach to the Balance of Payments Problem’, in Simonetta Cavaciocchi, ed., *Relazione economiche tra Europa e mondo islamico, seccoli XIII - XVIII*, Atti delle “Settimana di Studi” e altri convegni, no. 38, Istituto Internazionale di Storia Economica “Francesco Datini” (Florence: Le Monnier, 2007), pp. 907-62.

‘I panni di lana’: in Luca Ramin (editor in chief), *Il Rinascimento italiano et l’Europa*, vol. IV: *Commercio e cultura mercantile*, ed. by Franco Franceschi, Richard Goldthwaite, and Reinhold Mueller (Fondazione Cassamarca: Angelo Colla Editore: Treviso, 2007), pp. 105-41.

‘Hanseatic Commerce in Textiles from the Low Countries and England during the Later Middle Ages: Changing Trends in Textiles, Markets, Prices, and Values, 1290 - 1570’, in Marie-Luise Heckmann and Jens Röhrkasten, eds., *Von Nowgorod bis London: Studien zu Handel, Wirtschaft und Gesellschaft im mittelalterlichen Europa: Festschrift für Stuart Jenks zum 60. Geburtstag*, Nova Mediaevalia, Quellen und

Studien zum europäischen Mittelalter, vol. 4 (Göttingen: Vandenhoeck & Ruprecht Unipress, 2008), pp. 97-182.

'Three Centuries of Luxury Textile Consumption in the Low Countries and England, 1330 - 1570: Trends and Comparisons of Real Values of Woollen Broadcloths (Then and Now)', in Kathrine Vestergård and Marie Louise Nosch, eds., *The Medieval Broadcloth: Changing Trends in Fashions, Manufacturing,, and Consumption*, Ancient Textile Series, vol. 5 (Oxford: Oxbow Books, 2009), pp. 1-73. With 17 tables and 6 graphs (figures).

(5) **My last, most recent contribution, has been in the origins of the modern financial revolution:** the one that culminated in Great Britain from 1693 to 1752, as a permanent funded national debt based completely on the sale of fully negotiable perpetual annuities (that still trade, to this very day, on the London Stock Exchange as 2.5% Consols). My colleague James Tracy had demonstrated that this financial revolution had actually begun in the 16th century Habsburg Netherlands, and was further refined in the post 1560 Dutch Republic from where it was transmitted (via the Dutch King William III of Orange) to England in the 1690s. My contribution has been to demonstrate that beginnings lay with a dramatic shift in urban public finance, from the 1220s, in northern France and Flanders: from interest bearing loans to annuities, known as *rentes*, which, in not being redeemable by the citizens who bought them (furnishing funds to the government), and thus with no redemption dates, were not loans and hence were not subject to the usury prohibition. My key point is that this shift began when the revival and intensification of the anti-usury campaign – making usury a mortal sin against Natural Law – was in full swing, after the formation of the mendicant preaching orders (Franciscans and Dominicans).

My chief contribution here has been:

'The Medieval Origins of the Financial Revolution: Usury, *Rentes*, and Negotiablity', *The International History Review*, 25:3 (September 2003), 505-62.

[Note: this article has been cited in the earlier chapters in Niall Ferguson, *The Ascent of Money: A Financial History of the World* (New York: The Penguin Press, 2008).]

'The Usury Doctrine and Urban Public Finances in Late-Medieval Flanders (1220 - 1550): Rentes (Annuities), Excise Taxes, and Income Transfers from the Poor to the Rich', in Simonetta Cavaciocchi, ed., *La fiscalità nell'economia Europea, secc. XIII - XVIII/ Fiscal Systems in the European Economy from the 13th to the 18th Centuries*, Atti della 'Trentanovesima Settimana di Studi', 22 - 26 aprile 2007, Fondazione Istituto Internazionale di Storia Economica "F. Datini", Prato, Serie II: Atti delle "Settimane de Studi" et altri Convegni 39 (Florence: Firenze University Press, 2008), pp. 973-1026.

A major additional argument in this contribution is that financing public borrowing, in terms of such *rentes*, required a form of taxation that was highly regressive: excise taxes on the consumption of vital necessities, in terms of beer & wine (then necessities, not luxuries – given the dangers of drinking bacteria laden water and milk), bread, meat, and textiles, etc. This article demonstrates how heavy was that burden on the labouring classes; and that this burden rose – because of the necessity of financing warfare – when other factors would otherwise have led to rising real wages. In other words, rising consumer taxes virtually cancelled real wage increases during the so-called 'Golden Age of the Labourer'.

[See the review of this volume, and my contribution: by Julian Goodare (Edinburgh), in *Economic History*

Review, 2nd ser., 63:3 (August 2009), 754-55.

There is another element to be considered in understanding the origins of the modern Financial Revolution. For that Financial Revolution also required the establishment of full legal protection to creditors in terms of negotiability, since the central criterion of the financial revolution lay in the negotiability of these financial instruments, in secondary markets (e.g., the Amsterdam Exchange, the London Stock Exchange), since annuity holders could never get their funds back from the state (unless the government chose itself to redeem them).

Hence other publications on negotiability are important for this argument, some of which have been listed above, in other contexts:

'Bullionism and the Bill of Exchange in England, 1272-1663: A Study in Monetary Management and Popular Prejudice', in The Center for Medieval and Renaissance Studies of the University of California (Fredi Chiappelli, director), ed., *The Dawn of Modern Banking* (New Haven and London: Yale University Press, 1979), pp. 169-239; reprinted in John Munro, *Bullion Flows and Monetary Policies in England and the Low Countries, 1350 - 1500*, Variorum Collected Studies series CS 355 (Aldershot, Hampshire; and Brookfield, Vermont: Ashgate Publishing Ltd., 1992).

'The International Law Merchant and the Evolution of Negotiable Credit in Late-Medieval England and the Low Countries', in Dino Puncuh, ed., *Banchi pubblici, banchi privati e monti di pietà nell'Europa preindustriale: amministrazione, tecniche operative e ruoli economici, Atti della Società Ligure di Storia Patria*, Nouva Serie, Vol. XXXI (Genoa: Società Ligure di Storia Patria, 1991), pp. 49 - 80; reprinted in John Munro, *Textiles, Towns, and Trade: Essays in the Economic History of Late-Medieval England and the Low Countries*, Variorum Collected Studies series CS 442 (Aldershot, Hampshire; and Brookfield, Vermont: Ashgate Publishing Ltd., 1994).

'English "Backwardness" and Financial Innovations in Commerce with the Low Countries, 14th to 16th centuries', in Peter Stabel, Bruno Blondé, and Anke Greve, eds., *International Trade in the Low Countries (14th - 16th Centuries): Merchants, Organisation, Infrastructure*, Studies in Urban, Social, Economic, and Political History of the Medieval and Early Modern Low Countries (Marc Boone, general editor), no. 10 (Leuven-Apeldoorn: Garant, 2000), pp. 105-67.

'Banking and Credit: Early', in John B. Hattendorf, ed., *Encyclopedia of Maritime History*, 4 vols. (New York: Oxford University Press, 2007), vol. 1, pp. 262-265

Finally, my most recent publication, though still in press (due to be published by December 2009), deals with many of the above themes, in both monetary and financial history, and also in commercial history, in the context of the debate over the evolution of modern capitalist enterprise, in this case, in England.

'Tawney's Century: (1540 - 1640): the Roots of Modern Capitalist Entrepreneurship', in Will Baumol, David Landes, and Joel Mokyr, eds., *The Invention of Enterprise: Entrepreneurship from Ancient Mesopotamia to Modern Times* (Princeton: Princeton University Press, 2009), pp. 107-55.

My major thesis here is that though the seeds of modern capitalist entrepreneurship may have been sewn in Tawney's Century, their gemination and development did not take place until the following century, and the one that led into the modern Industrial Revolution: ca. 1660 - 1760. Of course, as one who is primarily a medievalist, I would never deny that the birth of European capitalism did take place the medieval era;

nevertheless European capitalism did undergo very profound changes in the early modern era, especially in the seventeenth century.

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A number of my earlier essays in both monetary and textile history have been reprinted in:

John H. Munro, *Bullion Flows and Monetary Policies in England and the Low Countries, 1350 - 1500*, Variorum Collected Studies series CS 355 (Aldershot, Hampshire; and Brookfield, Vermont: Ashgate Publishing Ltd., 1992). Pp. xvi + 312.

John H. Munro, *Textiles, Towns, and Trade: Essays in the Economic History of Late-Medieval England and the Low Countries*, Variorum Collected Studies series CS 442 (Aldershot, Hampshire; and Brookfield, Vermont: Ashgate Publishing Ltd., 1994). Pp. xvi + 326.

I also served as the Medieval Editor for the following:

Joel Mokyr (editor in chief), Maristella Botticini (assistant editor), Maxine Berg, Loren Brandt, Erik Buyst, Louis Cain, Jan de Vries, Paul Lovejoy, and John Munro (area editors), *The Oxford Encyclopedia of Economic History*, in 5 vols. (New York: Oxford University Press), 2003.

Please note that all of these publications have but a single author: John Munro. In my department of Economics, virtually all of my colleagues have co-authored publications.