Production and trade were hampered further by massive requisitions levied by the kings, thus causing a drastic fall of income and wealth, as well as bankruptcies among the producers. In short, consumers suffered from artificially high prices and producers from low returns, with the king bleeding the economy of the differential. Government borrowing was scarcely more helpful, leading to repeated defaults by the kings and consequent heavy losses and bankruptcies among the private bankers unwise enough to lend to the government.

Originating as a response to wartime 'emergency', the new taxes tended to become permanent: not only because the warfare lasted for over a century, but because the state, always on the lookout for an increase in its income and power, seized upon the golden opportunity to convert wartime taxes into a permanent part of the national heritage.

From the middle to the end of the fourteenth century, Europe was struck with the devastating pandemic of the Black Death – the bubonic plague – which in the short span of 1348–50 wiped out fully one-third of the population. The Black Death was largely the consequence of people's lowered living standards caused by the great depression and the resulting loss of resistance to disease. The plague continued to recur, though not in such virulent form, in every decade of the century.

Such are the great recuperative powers of the human race that this enormous tragedy caused virtually no lasting catastrophic social or psychological effects among the European population. In a sense, the longest-lasting ill effect from the Black Death was the response of the English Crown in imposing permanent maximum wage control and compulsory labour rationing upon English society. The sudden decline of population and consequent doubling of wage rates was met by the government's severe imposition of maximum wage control in the Ordinance of 1349 and the Statue of Labourers of 1351. Maximum wage control was established at the behest of the employing classes: large, middle and small landlords, and master craftsmen, the former groups in particular alarmed at the rise of agricultural wage rates. The ordinance and the statute defied economic law by attempting to enforce maximum wage control at the old pre-plague levels. The inevitable result, however, was a grave shortage of labour, since at the statutory maximum wage the demand for labour was enormously greater than the newly scarce supply.

Every government intervention creates new problems in the course of vain attempts to solve the old. The government is then confronted with the choice: pile on new interventions to solve the inexplicable new problems, or repeal the original intervention. Government's instinct, of course, is to maximize its wealth and power by adding new interventions. So did the English Statute of Labourers, which imposed forced labour at the old wage rates for all men in

England under the age of 60; restricted the mobility of labour, declaring that the lord of a particular territory had first claim on a man's labour; and made it a criminal offence for an employer to hire a worker who had left a former master. In that way, the English government engaged in labour rationing to try to freeze labourers at their pre-plague occupations at pre-plague wages.

This forced rationing of labour cut against the natural inclination of men to leave for more employment at better wages, and so the inevitable rise of black markets for labour made enforcement of the statutes difficult. The desperate English Crown tried once again, in the Cambridge Statute of 1388, to make the rationing more rigorous. Labour mobility of any sort was prohibited without written permission from local justices, and compulsory child labour was imposed in agriculture. But there was continual evasion of this compulsory buyers' cartel, especially by large employers, who were particularly eager and able to pay higher wage rates. The cumbersome English judicial machinery was totally ineffective in enforcing the legislation, although the monopolistic urban guilds (monopolies enforced by government) were able to partially enforce wage control in the cities.

3.2 Absolutism and nominalism: the break-up of Thomism

Along with the rise of the absolute state, theories of absolutism arose and began to throw natural law doctrines into the shade. The adoption of natural law theory, after all, meant that the state was bound to limit itself to the dictates of the natural or the divine law. But new political theorists arose, asserting the dominance of the temporal over the spiritual, and of the state's positive law over the natural or divine order. The first and most influential of such late medieval champions of absolutism was Marsiglio of Padua (c.1275–1342), in his famous *Defensor Pacis* (*Defence of the peace*) (1324). The son of a Paduan lawyer, Marsiglio rose to become rector of the University of Paris. The state, opined Marsiglio, is supreme and must be obeyed in and for itself. This glorification of the state went hand in hand with a denial that human reason could come to know any natural law outside of positive edicts of the state. For Marsiglio, reason had to be separated from justice or human society. Justice has no rational foundation; it is purely mystical and solely a matter of faith. God's commands are purely arbitrary and mysterious, and not to be understood in terms of rational or ethical content.

As a corollary, positive law has nothing to do with right reason; it is promulgated to advance the 'life and health of the state'. According to Marsiglio, the nation is an organism, with the state functioning as its head. As Professor Rothkrug writes, 'Marsiglio says the state is a living organism not subject to reason because, like a plant, it develops in accord with inborn impulses'.[2]

The practical conclusion Marsiglio derived from his political philosophy is that the state, whether kingdom or Italian city-republic, must have absolute power within its domain, and must not be subject to any temporal check or jurisdiction by the Church. Thus, while religiously a Catholic, Marsiglio anticipated the *politiques* in France and elsewhere two centuries later by insisting that the Church may have no temporal power as against the state. Marsiglio thereby foreshadowed and helped to bring about the break-up of the medieval order in Europe.

Also destructive of the achievements of the High Middle Ages was the ideological break-up of Thomism ushered in by the fourteenth century. This decline emerged out of Franciscan fideism, begun by St Thomas's great English rival John Duns Scotus. It used to be thought that this destruction was brought to a logical conclusion by the fourteenth century Franciscan Oxford philosopher William of Ockham (c.1290–1350). Ockhamite nominalism, it has been held, denied the power of human reason to arrive at the essential truths about man and the universe, and therefore negated the power of reason to arrive at a systematic ethic for man. Only God's will, discernible by faith in revelation, could yield truths, laws, or ethics. It should be clear that nominalism paved the way for modern scepticism and positivism, for if faith in divine will is abandoned, reason no longer has the power to arrive at scientific or ethical truths. Politically, nominalism failed to provide a natural law standard to set against the state, and it therefore fitted with the growing state absolutism of the Renaissance.

Recent scholarship, however, casts grave doubt on whether Ockham and his followers were really nominalists or were rather essentialists and believers in natural law. Thus, it turns out that the eminent Augustinian contemporary of Ockham, the Italian Gregory of Rimini (d.1358) was not really a nominalist but a staunch champion of essentialism, reason and natural law. In contrast to the usual view of Ockham and his followers, Gregory held that natural law comes not from God's will but from the dictates of right reason, and he even went further towards an all-out rationalist position generally thought to have been invented three centuries later by the Dutch Protestant philosopher and jurist Hugo Grotius. This position held that, even if God did not exist, the system of natural law would be given to us by the dictates of right reason, the violation of which would still be a sin. Thus, as Gregory put it: 'If, *per impossibile*, the divine reason, or God himself did not exist, or that that reason were mistaken, still if one were to act against right reason, angelic, human or any other if such there be, he would sin'.

3.3 Utility and money: Buridan and Oresme

Being a Franciscan and a student of William of Ockham did not prevent the great French philosopher–scientist Jean Buridan de Bethune (1300–58), born in Picardy, to become rector of the University of Paris, from making the next important contribution to economic thought in the essentialist Thomist tradition. In his *Quaestiones*, a thorough commentary on Aristotle's *Ethics*, Buridan continued the Aristotle–Thomas analysis of the exchange value of goods being determined by consumer need or utility. But Buridan also pressed on to point out that a house would never exchange for one garment, since the builder would have to forego a year's worth of food for a much less valuable good. In short, Buridan was groping towards an opportunity-cost concept of cost of production and influence on supply.

More importantly, Buridan advanced beyond the initiative of Richard of Middleton in analysing the mutual benefit that each party necessarily derives from an exchange. In discussing exchange, Buridan notes that both parties benefit, and that trade is not, as many people believe, a type of warfare in which one party benefits at the expense of another. Furthermore, Buridan proceeds to a sophisticated analysis in which he dramatically shows that two parties to a two-good exchange can both benefit even if the exchange is itself immoral and is to be condemned on ethical or theological grounds. Thus Buridan poses the rather provocative hypothetical:

> Because Socrates gave his wife willingly and with her consent to Plato to commit adultery in exchange for ten books, which one of them suffered a loss and which one gained? ... Both suffered injury as far as their soul was concerned...[but] with regard to the external good, each gained since he has more than he needs.

For Buridan as for most other scholastics, the just price was the market price. Buridan also provided a sophisticated analysis of how common human need and utility resulted in market prices. The greater the need and hence the greater the demand, the greater the value; also, a reduction in the supply of a product will cause its price on the market to rise. Furthermore, a good is more expensive where it is *not* produced than where it is, since there is a greater demand for it in the former place; again, the marginal concept is all that is needed to complete the analysis of demand, supply and price. There are also intimations in Buridan of different valuations by market participants resulting in a single price, with varying consumer and producer psychic surpluses for each participant.

But the main great leap forward in economics contributed by Jean Buridan was his virtual creation of the modern theory of money. Aristotle had analysed the advantages of money, and its overcoming of the double-coincidence-of-wants problem of barter, but his outlook was clouded by his fundamental hostility to trade and money-making. To Aristotle, therefore, money was not natural but an artificial convention, and therefore basically a creature of the state or *polis*. Aquinas's theory of money was basically confined within the Aristotelian shackles. It was Jean Buridan who broke free of those shackles and founded the 'metallist' or commodity theory of money, i.e. that money originates naturally as a useful commodity on the market, and that the market will pick the medium of exchange, almost always a metal if available, possessing the best qualities to serve as a money.

Money then, for Buridan, is a market commodity, and the value of that money, just as in the case of other market commodities, 'must be measured by human need'. Just as the values of exchangeable goods 'are proportionate to human need, so they will be proportionate to money, itself proportionate to human need'. Thus, Buridan remarkably set the agenda for determining the value or price of money, on the same principles of utility that determine the market prices of goods: an agenda which would only be fulfilled six centuries later in 1912 by the Austrian Ludwig von Mises, in his *Theory of Money and Credit*.

Foreshadowing the Austrians Menger and von Mises, Buridan insisted that an effectively functioning money must be composed of a material possessing a value independent of its role as money, i.e. it must consist of a market commodity originally useful for non-monetary purposes. Buridan then went on to catalogue those qualities that lead the market to choose a commodity as a medium of exchange or money, such as portability, high value per unit weight, divisibility and durability – qualities possessed most strikingly by the precious metals gold and silver. In that way, Buridan began the classification of monetary qualities of commodities which was to constitute the first chapter of countless money and banking textbooks down to the end of the gold standard era in the 1930s.

Thus, not only did Jean Buridan found the theory of money as a market phenomenon; he thereby took money out of the mystique of being solely a creation of the state, and put it on a par with other goods as a product of the marketplace.

A not very happy modern spin-off of Buridan's theory of volition emerged in the 1930s as part of the indifference curve analysis. Buridan postulated a perfectly rational ass who found himself equidistant between two equally attractive bundles of hay. Indifferent between the two choices and therefore unable to choose, the perfectly rational ass could choose neither and thereby starved to death. What this example overlooked is that there is a third choice, which presumably the ass liked the least: starving to death. So that it was therefore 'perfectly rational' *not* to starve to death but rather to choose one of the two bundles even at random (and then to proceed to the second bundle).[3]

Until recent years, conventional texts on the history of economic thought, if they dealt with anyone at all before the mercantilists or Adam Smith, briefly mentioned only two people: St Thomas Aquinas and Nicole Oresme (1325–82). Although Oresme, a noted French mathematician, astronomer and physicist, was one of the most important European intellectuals of the fourteenth century, his contributions to economic thought scarcely deserve such exclusive attention. Oresme was a pupil and follower of Jean Buridan, a scholastic commenting on Aristotle and teaching in his turn at the University of Paris and going on to become bishop of Lisieux. Oresme was moved to write his well-known booklet, *A Treatise on the Origin, Nature, Law and Alterations of Money*, in the 1350s, applying the teachings of his hard-money mentor to the rash of monetary debasements indulged in by the kings of France in the first half of the fourteenth century. In the centuries before paper money and central banking were founded in the late seventeenth century, the only way in which kings could gain revenue through monetary manipulation was by debasement – changing the definition of the money unit by lightening its weight in terms of the basic money, gold or silver. If, for example, the money unit had been defined as 10 ounces of silver, the government could use its monopoly of the coinage to redefine the money unit as 9 silver ounces, and then pocket the difference in the course of recoinage. The extra ounces would be employed to mint new coins for the king to use in wars, for the building of palaces, and for other allegedly worthy causes.

The British currency unit, the pound sterling, got its name centuries ago by originally being defined as simply one pound of silver. The process of debasement in Britain has proceeded so far that the 'pound' is now equal to less than $^1/_4$ a silver ounce.

Before the advent of paper money and central banking, then, debasement was the only process by which the ruler could alter the currency to create a greater supply of money (in terms of the money unit), and thereby cause price inflation. The king was able to use his compulsory monopoly of the coinage to manipulate repeated debasements for his own gain at the expense of the rest of the public.

Oresme's most important contribution to monetary theory was to enunciate clearly, for the first time, what came to be known as 'Gresham's law', that is, the insight that if two or more moneys are legally fixed in relative value by the government, then the money overvalued by the government will drive the undervalued money out of circulation. Thus if the government decrees that, say, 1 ounce of gold is legally worth 10 ounces of silver, whereas on the free market it is worth 15, the people will stick their creditors and vendors with the legally overvalued money (silver–the 'bad' money) while they hoard the undervalued (gold – the 'good' money) or export it out of the country where it can be sold at its market value. Gresham's law has often been boiled down in common parlance into: 'bad money drives out good', but stated that way it is paradoxical and unsatisfying. For it implies that while in all other market products the good will outcompete the bad, there is some deep flaw in the free market that causes it to prefer good *money* to bad. But as Ludwig von Mises clarified in the early twentieth century, Gresham's law is the product not of the free market but of government monetary control. Its fixing of relative money value is a special case of the general consequence of any price control, i.e. shortage of a good in which maximum prices are imposed, and a 'surplus' where a minimum price is enforced. In the case of money, in our example, gold suffers a maximum price control and therefore a shortage, while the value of silver is kept up artificially and therefore goes into surplus relative to gold.

The first formulation of Gresham's law was that of the satiric ancient Greek playwright, Aristophanes, who, in *The Frogs*, states characteristically: 'In our Republic bad citizens are preferred to good, just as bad money circulates while good money disappears'.[4] Oresme, however, put the law in a cogent and correct manner, emphasizing that the monetary disruption is a function of government price-fixing: 'if the fixed legal ratio of the coins differs from the market value of the metals, the coin which is underrated entirely disappears from circulation, and the coin which is overrated alone remains current'.

In his *Treatise*, Nicole Oresme was moved to apply his mentor Buridan's metallist monetary theory to attack the debasement policy of the French kings. Oresme did not go so far as to denounce the king's coinage monopoly *per se*, but he did accomplish the feat of taking the whole matter out of the kings' carefully propounded mystique of 'sovereignty', converting the entire coinage question to a matter of practical convenience. Since the king was not entitled to cloak coinage in the mystique of royal prerogative and absolute royal will, he was duty-bound to govern according to the best interests of the community. He is therefore obliged to maintain the standards of weight and of coinage; frequent alterations in such standards 'destroy respect and breed "scandal and murmuring among the people and risk of disobedience"'. The definition of the currency unit should therefore be a fixed ordinance. Frequent alterations and debasements, Oresme pointed out, will cause money and coins to lose their character as measures of value; and internal and external trade will be crippled. Foreign merchants will be repelled, since they will no longer have good, safe money to work with, while domestic traders will no longer have any firm means of communication. Money could no longer be loaned out safely, and there would be no way of correctly valuing money incomes.

Furthermore, since debased money will have a lower value at home, gold or silver will be sent abroad where they will now have a higher market value. Thus Oresme was perhaps the first to point out that money will tend to flow to those areas and countries where its value is highest, and to leave those countries where its value is lowest.

Nicole Oresme had no illusions about the reasons for the kings' repeated debasements. As Oresme put it: if the king 'should tell the tyrant's usual lie that he applies the profit from debasement to the public advantage, he must not be believed, because he might as well take my coat and say he needed it for the public service'.

Oresme also adds to Buridan's analysis of how commodities become money on the market: he stresses easy portability, and that it should be of high value per unit weight. He also points out that after a period of gold or silver being weighed out in precise quantities for each transaction, people started to coin the precious metals, with an inscription and a head on the coin to guarantee a certain quantity of gold or silver in each coin. Gold, being a more valuable money, will generally be used for larger transactions, while silver and even copper may be used for smaller purchases.

3.4 The odd man out: Heinrich von Langenstein

One nominalist and student of Buridan, Heinrich von Langenstein the Elder (also known as Henry of Hesse) (1325–97), while an uninfluential and minor scholastic philosopher in his own and later centuries, made great mischief for modern interpretations of the history of economic thought. Langenstein, who taught first at the University of Paris and then at Vienna, began in his *Treatise on Contracts* by analysing the just price in the mainstream scholastic manner: just price is the market price, which is a rough measure of the human needs of consumers. This price will be the outcome of individuals' calculations about their wants and values, and these in turn will be affected by the relative lack or abundance of supply, as well as by the scarcity or abundance of buyers.

Having said this, Langenstein proceeded to contradict himself completely. In a highly unfortunate contribution to the history of economic thought, Langenstein urged local government authorities to step in and fix prices. Price-fixing would somehow be a better path to the just price than the interplay of the market. Other scholastics had not exactly opposed price-fixing; for them, the market price was just whether it was set by the common estimate of the market or by the government. But it was at least implicit in their writings that the free market was a better (or at the very least an equally good) path to discovering the just price. Langenstein was unique in positively advocating government price-fixing.

Moreover, Langenstein added another economic heresy. He counselled the authorities to fix the price so that each seller, whether merchant or craftsman, could maintain his status or station in life in the society. The just price was the price which maintained everyone's position in the style to which he had become accustomed – no more and no less. If a seller tried to charge a price to advance beyond his station, he was guilty of the sin of avarice.

Langenstein was the odd man out among the scholastics and late medieval thinkers. No one has been found to second the 'station in life' concept of the just price. Indeed St Thomas Aquinas himself effectively demolished this view when he trenchantly declared

> In a just exchange the medium does not vary with the social position of the persons involved, but only with regard to the quantity of the goods. For instance, whoever buys a thing must pay what the thing is worth whether he buys from a pauper or a rich man.

In short, on the market prices are the same to all, rich or poor, and furthermore this is a just method of establishing prices. In the bizarre Langenstein view, of course, a wealthy seller of the same product would be obliged to sell it for a far higher price than a poor seller, in which case it is unlikely that the wealthy man would last long in the business.

As far as can be determined, no medieval or renaissance thinker adopted the station in life theory, and only two followers adopted the price-fixing position. One was Matthew of Cracow (c.1335–1410), professor of theology at Prague and later rector at the University of Heidelberg and archbishop of Worms, and particularly Jean de Gerson (1363–1429), nominalist and French mystic who was chancellor of the University of Paris. Gerson, however, ignored the station in life notion and reverted to the thirteenth century view of John Duns Scotus that the just price is the cost of production plus compensation for labour and risk incurred by the supplier. Gerson therefore urged that the government fix prices to force them to conform to the allegedly just price. Indeed, Gerson was a fanatic on price-fixing, advocating that it be extended from its customary sphere in wheat, bread, meat, wine and beer, to embrace all commodities whatsoever. Fortunately, Gerson's view also had little influence.

Von Langenstein was scarcely important in his own or at a later day; his great importance is solely that he was plucked out of well-deserved obscurity by late nineteenth century socialist and state corporatist historians, who used his station in life fatuity to conjure up a totally distorted vision of the Catholic Middle Ages. That era, so the myth ran, was solely governed by the view that each man can only charge the just price to maintain him in his presumably divinely appointed station in life. In that way, these historians glorified a non-existent society of status in which each person and group found himself in a harmonious hierarchical structure, undisturbed by market relations or capitalist greed. This nonsensical view of the Middle Ages and of scholastic doctrine was first propounded by German socialist and state corporatist historians Wilhelm Roscher and Werner Sombart in the late nineteenth century, and it was then seized upon by such influential writers as the Anglican Socialist Richard Henry Tawney and the Catholic corporatist scholar and politician Amintore Fanfani. Finally, this view, based only on the doctrines of one obscure and heterodox scholastic, was enshrined in conventional histories of economic thought, where it was seconded by the free market but fanatically anti-Catholic economist Frank Knight and his followers in the now highly influential Chicago School.

The much-needed corrective to the older view has at last become dominant since World War II, led by the enormous prestige of Joseph Schumpeter and by the definitive research of Raymond de Roover.

3.5 Usury and foreign exchange in the fourteenth century

The charging of interest on a loan continued to be condemned totally as usury by the mainstream of scholastic writing: only a minority followed Cardinal Hostiensis and Olivi in allowing *lucrum cessans* – return on investment foregone – and then only for a charitable loan and not for professional money-lenders. Foreign exchange transactions fared no better, the mainstream of scholastics, including St Thomas, simply condemning them outright as usurers and as trying to charge interest on barren money.

By the thirteenth and fourteenth century, however, bills of exchange were coming into prominence as credit instruments, particularly in foreign exchange dealings. Sophisticated forms of foreign exchange transactions developed, in which dealers could charge and pay interest on credit, but such transactions were formally disguised as purchases or sales of foreign currencies. Again, most scholastics continued to condemn exchange dealings, but a courageous minority arose during the fourteenth century to champion these now pervasive transactions, in which the Church itself had for a long time been engaged. It started weakly with Aquinas's chief personal disciple, Giles of Lessines, who while confused about the foreign exchange market, did speak of risk as justifying these credit transactions and also showed that the exchange dealer gives something of 'more utility' to his customer than what the customer pays, entitling him to an extra charge.

The main defence of the foreign exchange market was launched by the distinguished Franciscan Alexander Bonini, also known as Alexander of Alexandria or Alexander Lombard. Bonini had an academic career at the University of Paris, then lectured at the papal court in theology, and finally served as the Franciscan provincial in his native Lombardy, the site of the most notorious usurers of the day. In his *Treatise on Usury*, a lecture given at Genoa in 1307, Alexander, while attacking usury in the usual way, presented a thoroughgoing defence of the foreign exchange transactions with which he was familiar. Attacking the Aristotelians, Alexander pointed out that money cannot have only one function, of serving as a barren medium of exchange, since there are many coins and these coins must be exchanged. The value of the coins thus traded, furthermore, is properly determined not by law but by the weight and the content of the coins. Alexander also adopted Giles of Lessines's insight that the dealer provides more utility to his customer than he receives in the money transactions. As for credit transactions in foreign exchange, Alexander Lombard did not defend them all, but provided a *lucrum cessans* defence for the changes in the value of a money between the beginning and the end of the transaction. Indeed, Alexander was one of the first to point out that the demand for money can and does vary over time, giving rise to changes in the value of money. *Lucrum cessans* provided the entering wedge for the scholastic justification of the main method by which the usury prohibition was evaded during and after the High Middle Ages.

It is illuminating that Alexander had begun his defence with the practical point that 'the Church always condemns and pursues usurers, but it does not condemn and pursue the exchange dealers, but, rather, fosters them as is apparent in the Roman Church'.

Alexander Lombard's defence of the foreign exchange market was repeated verbatim by his disciple and successor as Franciscan provincial of Lombardy: Astesanus (d. 1330). Astesanus, like his mentor, came from Lombardy, specifically from Asti, one of the principal locations of the leading international usurers. His main work was his *Summa* (1317). Like his predecessor, Astesanus was impressed by the fact that 'the Roman Church fosters the exchange dealers'. Furthermore, he adds to Alexander's reasoning a frank defence of *lucrum cessans*, which he was one of the first theologians, as distinct from canonists, to embrace.

Among the prominent fourteenth century writers we have already discussed, Heinrich von Langenstein, as we might expect, denounced all foreign exchange dealers as usurers *per se*. Even Nicole Oresme simply repeated the Aristotelian shibboleth that the trade of money for money is unnatural because money is barren. While not precisely declaring exchange transactions to be usurious *per se*, Oresme, in a flight of hate, denounced foreign exchange as 'vile', as an occupation that stains the soul just as cleaning sewers stains the body.

In contrast, however, Jean Buridan, Oresme's mentor, engaged in a defence of foreign exchange, distinguishing two kinds of exchange, one where the dealer 'gets only as much as he gives' – perfectly worthy according to the Aristotelian–Thomist tradition – and another where the dealer 'takes more than he gives'. But here Buridan makes another might leap in tearing down some of the irrational barriers that the scholastics had drawn up against monetary transactions. For even the latter kind of transaction, declared Buridan, may be legitimate, even if there is no equivalent in exchange, provided the exchange promotes the 'common good'. While not used for ordinary usury, Buridan's new concept sowed the seeds for total justification of the foreign exchange bankers.

At the turn of the fifteenth century, a thoroughgoing defence of exchange contracts was set forth by the sophisticated Florentine lay canon lawyer Lorenzo di Antonio Ridolfi (1360–1442). Ridolfi was a lecturer at the Athenaeum in Florence and was at one time ambassador of the Florentine Republic. Just as Lombard was unwilling to condemn a practice encouraged by the Church, so Ridolfi declared his unwillingness to condemn an occupation pervasive in his native Florence. Developing the insight of Lombard, Ridolfi, in his 1403 treatise on usury, emphasized that the value of money can differ from one place to another as well as over time. These differences are the result of changes in the demand for money, fluctuations of the demand relative to the supply, and alterations in the metallic content of the coinage. These variations justify foreign exchange dealings as well as credit transactions within them. Thus, Ridolfi developed the theory which showed that the value of money, like any other commodity, is determined by the interactions of its demand and supply, and that it too can vary in value over time and place.

3.6 The worldly ascetic: San Bernardino of Siena

The great mind, and the great systematizer, of scholastic economics was a paradox among paradoxes: a strict and ascetic Franciscan saint living and writing in the midst of the sophisticated capitalist world of early fifteenth century Tuscany. While St Thomas Aquinas was the systematizer of the entire range of intellectual endeavour, his economic insights were scattered in fragments throughout his theological writings. San Bernardino of Siena (1380–1444) was the first theologian after Olivi to write an entire work systematically devoted to scholastic economics. Much of this advanced thought was contributed by San Bernardino himself, and the highly advanced subjective utility theory was cribbed word for word from the Franciscan heretic of two centuries earlier: Pierre de Jean Olivi.

San Bernardino's book, written as a set of Latin sermons, was entitled *On Contracts and Usury*, and was composed during the years 1431–33. The treatise began, quite logically, with the institution and justification of the system of private property, proceeded to the system and the ethics of trade, and continued to discuss the determination of value and price on the market. In ended with a lengthy discussion of the tangled usury question.

San Bernardino's chapter on private property was nothing remarkable. Property was considered artificial rather than natural, but still vital for an efficient economic order. One of Bernardino's great contributions, however, was the fullest and most cogent discussion yet penned on the functions of the business entrepreneur. In the first place, the merchant was given an even cleaner bill of health than had been given by Aquinas. Sensibly, and in contrast to early doctrines, San Bernardino pointed out that trade, like all other occupations, could be practised either licitly or unlawfully. *All* callings, including that of a bishop, provide occasions for sin; these are scarcely limited to trade. More specifically, merchants can perform several kinds of useful service: transporting commodities from surplus to scarce regions and countries; preserving and storing goods to be available when the consumers want them; and, as craftsmen or industrial entrepreneurs, transforming raw materials into finished products. In short, the businessman can perform the useful social function of transporting, distributing, or manufacturing goods.

In his justification of trade, San Bernardino finally managed to rehabilitate the lowly retailer, who had been scorned ever since ancient Greece. Importers and wholesalers, Bernardino pointed out, buy in large quantities and then break bulk by selling by the bale or load to retailers, who in turn sell in minute quantities to consumers.

Realistically, Bernardino did not condemn profits; on the contrary, profits were a legitimate return to the entrepreneur for his labour, expenses and the risks that he undertakes.

San Bernardino then goes into his trenchant analysis of the functions of the entrepreneur. Managerial ability, he realized, is a rare combination of competence and efficiency, and therefore commands a large return. San Bernardino lists four necessary qualifications for the successful entrepreneur: efficiency or diligence (*industria*), responsibility (*solicitudo*), labour (*labores*), and assumption of risks (*pericula*). Efficiency for Bernardino meant being well-informed about prices, costs, and qualities of the product, and being 'subtle' in assessing risks and profit opportunities, which, Bernardino shrewdly observed, 'indeed very few are capable of doing'. Responsibility meant being attentive to detail and also keeping good accounts, a necessary item in business. Trouble, toil, and even personal hardships are also often essential. For all these reasons, and for the risk incurred, the businessman properly earns enough on successful investments to keep him in business and compensate him for all his hardships.

On determination of value, San Bernardino continued in the mainstream scholastic tradition, with value and the just price being determined by the common estimation of the market. Price will fluctuate in accordance with supply, rising if supply is scarce and falling if abundant. Bernardino also has a penetrating discussion of the influence of cost. Cost of labour, skill and risk do not affect price directly, but will affect the supply of a commodity, and *ceteris paribus* (other things being equal – a phrase used by San Bernardino) things requiring greater effort or ingenuity to produce will be more expensive and command a higher price. This insight prefigures the Jevons/Austrian analysis of supply and cost over five centuries later.

As in the case of other scholastics, the common estimation of the market was held to be the common market price (but *not* a price set by individual free bargaining). The government was considered able to fix a common market price by compulsory regulation, but this possibility, as in the case of most other scholastics, was dismissed quickly.

As we have seen, San Bernardino took over word for word the remarkable subjective utility theory of value published (and previously neglected) by the

Franciscan Pierre de Jean Olivi. Bernardino's significant contribution to the theory of the just-as-market price was to apply it to the 'just wage'. Wages are the price of labour services, Bernardino pointed out, and therefore the just, or market wage will be determined by the demand for labour and the available supply of labour on the market. Wage inequality is a function of differences of skill, ability and training. An architect is paid more than a ditch-digger, Bernardino explained, because the former's job requires more intelligence, ability and training, so that fewer men will qualify for the task. Skilled workers are scarcer than unskilled, so that the former will command a higher wage.

In a sophisticated discussion of foreign exchange, Bernardino put his *imprimatur* on transactions that were the dominant way in which hidden interest was charged for a credit transaction. Here, Bernardino followed the latitudinarian view of his master Alexander Lombard. Generally, exchange transactions were conversions of currencies and not loans. Furthermore, usury was only a certain and riskless interest on a loan; foreign exchange rates fluctuated and were therefore unpredictable. This was technically true, but generally lenders received interest on exchange transactions, since the money market was structured to favour the lender in this way. Bernardino also pointed out that conversion of currencies was necessary because of the great diversity of currencies, and because the coinage of one country was not acceptable elsewhere. The money-exchangers, therefore, performed a useful function by enabling foreign trade, 'which is essential to the support of human life', and by transferring funds from one country to another without requiring the actual shipping of specie.

San Bernardino of Siena was a fascinating and paradoxical combination of brilliant, knowledgeable, and appreciative analyst of the capitalist market of his day, and an emaciated ascetic saint fulminating against worldly evils and business practices. Bernardino was born in 1380 to a high official of Siena; his father, Albertollo degli Albizzeschi, was governor of the town of Massa for the Republic of Siena. Bernardino's mother also belonged to a prominent local family. Joining the strictly ascetic order of the Observant Franciscans, Bernardino soon became noted as a persuasive and highly popular travelling orator, preaching throughout northern and central Italy. In the 1430s, Bernardino was appointed vicar general of the Observant Franciscans. Three times in his lifetime, San Bernardino was offered bishoprics (in Siena, Urbino and Ferrara), and each time he refused this honour, since he would have had to give up his preaching.

Some of Bernardino's anti-worldly preaching dwelt on problems of personal morality; thus, he deplored the practice of travelling merchants staying away from home for long periods, and then defiling themselves by living in carnal sin or even sodomy, which the saint habitually referred to as 'filth'.

Indeed, in his youth, Bernardino punched a man who had made homosexual overtures.

But Bernardino's main contradiction between sophisticated analyst of business and denouncer of business practice lay in his fulmination against usury. Surrounded by the home of usury in Tuscany, San Bernardino, in common with so many scholastics, found that realism stopped short at the usury door. On the usury question, the saint's brilliant analysis and benign view of the free market failed him, and he fulminated almost in a frenzy: usury was a vile infection, permeating business and social life. Whereas other scholastics had taken seriously the objection that Church and society depended upon usury, Bernardino did not care. No: it could not be. All those holding that usury was economically necessary were committing the sin of blasphemy, since they would therefore be saying that God had bound them to an impossible course of action. Abolish the charge of interest, Bernardino opined, and people would then lend freely and gratuitously; and besides far too much is being borrowed now, for frivolous and vicious purposes. Usury, the saint thundered, destroys charity; it is a contagious disease; it stains the souls of all in society; it concentrates all the money of the city into a few hands or drives it out of the country; and what is more, it justly brings the wrath of God upon the city, and invites the Four Horsemen of the Apocalypse.

One can only stand in awe at the fury of unreason in which this truly great thinker indulged himself on the usury issue. Ranting about the usurer daring to 'sell time', Bernardino went further than his predecessors in insisting that only Jesus Christ 'knows the time and the hour. If therefore it is not ours to know the time, much less is it ours to sell it'. Is keeping watches and clocks therefore a mortal sin? Bernardino winds up in a fit of almost hysterical frenzy at the hapless usurer:

> Accordingly, all the saints and all the angels of paradise cry then against him [the usurer], saying 'To hell, to hell, to hell.' Also the heavens with their stars cry out, saying, 'To the fire, to the fire, to the fire.' The planets also clamor, 'To the depths, to the depths, to the depths.'

And yet, despite all this, San Bernardino added his great weight to the concept that would eventually scuttle the usury prohibition: *lucrum cessans*. Following Hostiensis and a minority of fourteenth century scholastics, Bernardino admits *lucrum cessans*: it was all right to charge interest on a loan which would be the return sacrificed – the opportunity foregone – for a legitimate investment. It is true that Bernardino, like his predecessors, limited *lucrum cessans* strictly to a charitable loan, and refused to apply it to professional money-lenders. But he made an important analytic advance by explaining that *lucrum cessans* is legitimate because in that situation money is not simply barren money but 'capital'. As Bernardino put it, when a businessman lends from balances which would have gone into commercial investment, he 'gives not money in its simple character, but he also gives his capital'. More fully, he writes that money then 'has not only the character of mere money or a mere thing, but also beyond this, a certain seminal character of something profitable, which we commonly call capital. Therefore, not only must its simple value be returned, but a super-added value as well'.

In short, when money functions as capital, it is no longer barren or sterile; as capital it deserves to command a profit.

There is something more. In the course of lengthy arguing against hidden usury in various forms of contracts, the brilliant mind of San Bernardino stumbles, for one of the first times in history, upon what later would be called 'time-preference': that people prefer present goods to future goods (i.e. the present prospect of goods in the future). But he failed to recognize its importance, and dismissed the point. It was left to the late eighteenth century Frenchman Turgot and then to the great Austrian economist Eugen von Böhm-Bawerk to discover the principle in the 1880s and hence finally solve the age-old problem of explaining and justifying the existence and height of the rate of interest.

3.7 The disciple: Sant'Antonino of Florence

San Bernardino's major disciple was the highly influential and slightly younger Sant'Antonino of Florence (1389–1459). Much of Antonino's influence came from his prolific writings, especially his enormous Thomistic *Summa Moralis Theologiae* (1449), the first treatise in the new science of moral theology. In moral theology, or casuistry, the theologian takes the abstract principles of theology and ethics and applies them to the detailed empirical data of daily life: in short, theology and morality were brought from the abstractions of the study and applied to the details of everyday life.

Sant'Antonino's pioneering *Summa* of moral theology proved to be extraordinarily influential. It was frequently consulted for the next 150 years, and went through 24 printings in that period. His shorter *Confessionals* (1440), a guidebook for confessors, was reprinted 30 times in the same century and a half.

There are striking parallels in the lives and personalities of Antonino and his master Bernardino. Sant'Antonino was born the son of a minor official, the notary of Florence, Ser Niccolo de Pierozzo dei Forciglioni. The son's first name was Antonio, but he was universally called by the diminutive Antonino because of his short stature, and the nickname is listed in the official Church calendar of saints. Although in frail health, Antonino early joined the strict, Observant branch of the Dominican Order. His administrative talents were unusual and spotted quickly, and he soon became prior of the Dominican friary of Cortona, and was then transferred to similar posts in Naples and Rome. After