

Merchant's Time and Church's Time in the Middle Ages

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The merchant in the Middle Ages was not held in contempt as commonly as he is said to have been, particularly in the wake of certain remarks of Henri Pirenne, who placed too much confidence on this point in theoretical texts.¹ Nevertheless, while the Church very early gave protection and encouragement to the merchant, it long allowed serious suspicions to persist as to the legitimacy of essential aspects of his activity. Some of these aspects enter profoundly into the world view of medieval man. Or rather, in order not to yield to the myth of an abstract collective individual, one should say that these factors entered profoundly into the world view of those men in the West between the twelfth and fifteenth centuries who were in possession of sufficient cultural and mental equipment to reflect on professional problems and their social, moral, and religious consequences.

Among the principal criticisms levelled against the merchants was the charge that their profit implied a mortgage on time, which was supposed to belong to God alone. For example, we have the following remarks of a lector-general of the Franciscan order in the fourteenth century concerning a disputed question: 'Question: is a merchant entitled, in a given type of business transaction, to demand a greater payment from one who cannot settle his account immediately than from one who can? The answer argued for is no, because in doing so he would be selling time and would be committing usury by selling what does not belong to him.'²

From *Time, Work and Culture in the Middle Ages*, Chicago, 1982, pp. 29–42.

Before isolating the conception of time hidden behind this argument, we should point out the problem's importance. The whole of economic life at the dawn of commercial capitalism is here called into question. To reject the notion of earnings on time and to identify the practice with the basic vice of usury is not merely to attack the principle of interest but to destroy the very possibility of credit. For the merchant, time is a prime opportunity for profit, since whoever has money counts on being able to profit from the expectation of reimbursement by someone who has none immediately available, inasmuch as the merchant's activity is based on assumptions of which time is the very foundation—storage in anticipation of famine, purchase for resale when the time is ripe, as determined by knowledge of economic conjunctures and the constants of the market in commodities and money—knowledge that implies the existence of an information network and the employment of couriers.³ Against the merchant's time, the Church sets up its own time, which is supposed to belong to God alone and which cannot be an object of lucre.

In fact, this is the same problem which, at this crucial point in the history of the West, took an acute form in the matter of teaching: could knowledge be sold, since, as St. Bernard had pointed out in his usual forceful manner, it, too, belonged only to God?⁴ What is at stake here is the whole process of secularisation of the basis and context of human activity: labour time, and the conditions of intellectual and economic production.

The Church no doubt tried to lighten ship when conditions changed. In the first place, it accepted and soon came to encourage the historic evolution of economic and professional structures. But the theoretical elaboration of this adaptation at the canonical and theological level proceeded slowly and with great difficulty.

The conflict, then, between the Church's time and the merchant's time takes its place as one of the major events in the mental history of these centuries at the heart of the Middle Ages, when the ideology of the modern world was being formed under pressure from deteriorating economic structures and practices. We would like now to explain the major points at issue in this conflict.

1

Christianity is frequently judged to have fundamentally

transformed the problem of time and history. Sustained by Holy Scripture and used to basing all their thinking on the Bible, medieval clerics regarded time in the light of biblical texts and, beyond the Good Book, in the light of the tradition passed down through primitive Christianity from the Fathers and the exegetes of the early Middle Ages.

For the Bible and primitive Christianity, time is primarily theological time. It 'begins with God' and is 'dominated by Him.' Consequently, divine action in its totality is so naturally connected with time that time cannot pose a problem; it is rather the necessary and natural condition of every 'divine' act. We are following Oscar Cullmann, who is no doubt correct in maintaining against Gerhard Delling that primitive Christianity is close to Judaism in this respect and did not bring about an 'eruption of eternity into time, which would thus have been vanquished.'⁵ For the early Christians, eternity was not opposed to time, nor was it—as it was, for example, for Plato—'the absence of time'. Their eternity was merely the extension of time to infinity, 'the infinite succession of aeons', to use a term from the New Testament, these being both 'precisely delimited expanses of time' and unlimited and incalculable durations.⁶ We will return to this notion of time when it becomes necessary to oppose it to the tradition inherited from Hellenism. For our present purposes we need only say that, from this point of view, there is a quantitative rather than a qualitative difference between time and eternity.

As compared with Judaic thought, the New Testament introduces, or, rather, makes explicit, one new condition. The appearance of Christ, the fulfilment of the promise, the Incarnation give time a historic dimension or, better still, a centre. Subsequently, 'the whole history of the past, from the Creation until Christ, as told in the Old Testament, becomes part of the history of salvation.'

This is an ambiguous development, however. For Christians as for Jews, time had an end, a *telos*. In this respect, the Incarnation was a crucial event. 'The future is no longer, as it is for Judaism, the *telos* giving a sense to the whole of history.'⁸ Eschatology takes its place in a new perspective, becoming, in a sense, secondary. It, too, belongs to the past, since Christ has somehow abolished it by bringing certainty of salvation. The problem becomes one of how to achieve what Christ has begun once and for all. The Second Coming was not merely prefigured on the day of Pentecost; it has already begun, although its completion depends on the cooperation of the

Church, clergy and laymen, apostles, saints, and sinners. The 'Church's missionary duty and the preaching of the Gospel give meaning to the time between the Resurrection and the Second Coming.'⁹ Christ brought the certainty of eventual salvation with him, but collective and individual history must still accomplish it for all, as well as for each individual. Hence the Christian must simultaneously renounce the world, which is only his transitory resting place, and opt for the world, accept it, and transform it, since it is the workplace of the present history of salvation. In this connection, Oscar Cullmann gives a very convincing interpretation of a difficult passage in St. Paul (1 Cor. 7:30 ff.).¹⁰

We should point out, before we encounter the problem of time in a concrete medieval context, that this problem was to arise as one of the essential aspects of the notion of time during the crucial period in the eleventh and twelfth centuries that also witnessed a rebirth of eschatological heresies in certain social groups, including merchants. In this growth of millenarianism, unconscious class reactions, along with individual destiny, played a part. There is a history to be written which will explain Joachimism as well as many other revolutionary movements involving both the soul and economic status. In this era the Apocalypse was not an enthusiasm of fringe groups or misfits, but the hope and sustenance of oppressed groups and hungry people. St. John's horsemen of the Apocalypse number four, of course: three of them represent the 'wounds', or earthly calamities—famine, epidemic, war—but the first sets out as a conqueror in search of victory. For St. John he was the Missionary of the Word; for the medieval masses, however, he was the guide who would lead them in a dual victory, here below and in the hereafter.¹¹

Once relieved of the explosive charge of millenarianism, biblical time was left to the orthodox, around the beginning of the twelfth century. It became a part of eternity. It has been said that 'for the Christian in the Middle Ages... to feel his existence was to feel his being, and to feel his being was to feel himself not changing, not succeeding himself in time, but subsisting.... His tendency to nothingness (*habitudo ad nihil*) was compensated by an opposite tendency toward the first cause (*habitudo ad causam primam*).'¹² This time, moreover, was linear and had a sense or direction, tending toward God. 'Time ultimately carried the Christian toward God.'

This is not the place to describe in its full complexity and welter of interrelations that 'major break in the twelfth century, one of the most fundamental in the development of European society.'¹³ The accelerating economic pace, of great importance, will be indicated when we return to the subject of the merchant. For now, it is enough to notice how the disturbance of mental structures opened fissures in the traditional forms of thought; through the openings thus provided, spiritual needs connected with new economic and social conditions entered, leading to a variety of repercussions.

There can be no doubt that the disappearance of the Roman Empire, the barbarisation of the West, and, to a lesser degree, the imperial restorations wrought first by Charlemagne and later by Otto gave rise to thought about history; Christianity took its place in a historical evolution which, though dominated, for its adepts, by Providence and directed toward salvation, had to appeal to secondary causes, both structural and contingent, in fashioning its explanations. Unfortunately for historical thought, Augustine's interpretations were weakened and distorted during the late Middle Ages. With Saint Augustine, in Henri Marrou's felicitous terminology, historical time kept a certain 'ambivalence' so that, within the framework of eternity and subordinated to Providential action, men had some control over their own and mankind's destiny.¹⁴ As Bernheim and Monsignor Arquilliére have shown,¹⁵ however, the great ideas in *De civitate Dei*, in which historical analyses echo theological developments, are emptied of historicity by political Augustinism, from Gelasius to Gregory the Great and Hincmar. The feudal society in which the Church becomes mired between the ninth and eleventh centuries congeals historical thought and seems to stop historical time or at least assimilate it to the history of the Church. In the twelfth century, Otto of Freising, uncle of Frederick Barbarossa, wrote: 'From that time [of Constantine] on, since not only all men but even emperors, with few exceptions, were Catholics, it seems to me that I have written the history not of two cities but, so to speak, of only one, which I call the Church.' The epic and gest were also negations of history by feudal society, which used historical items only to strip them of historicity in the context of an atemporal ideal.¹⁶

Father Chenu has recently shown brilliantly how, during the course of the twelfth century, the traditional framework of Christian thought on time was seriously shaken.¹⁷

In this, the urban schools probably played only a secondary role, and Father Chenu notes 'that the scholastic masters made virtually no use of the great historical texts of *De civitate Dei*, which were rather meditated upon by monastic writers.'

Without doubt, the Old Testament still held sway over men's minds. Against a more flexible conception of time it set up the dual impediment of the Judaic view of a petrified eternity and a symbolism which, as systematised in an explanatory and exploratory methodology, and through Old-New Testament parallelism, completely did away with the concrete reality of historical time.¹⁸

History got a new start, albeit on a modest basis, with Hugh of Saint-Victor, who devoted a large part of his *Didascalicon* to 'historia'. His definition, 'historia est rerum gestarum narratio', simply echoes the one that Isidore of Seville borrowed from the Latin grammarians who commented on Vergil. Being expressed in the form of a series narrationis, however, it is 'a succession, and an organised succession, an articulated continuity, whose interconnections have a meaning which is precisely the object of historical intelligibility; not Platonic ideas, but rather God's initiatives in human time, events in Salvation.'¹⁹

This history borrowed from the ancients—and from the Bible—the theory of ages, periods which for most clerical historians reproduced the six days of the Creation—that other event that weighed heavily in the thought of twelfth-century theologians, but which we cannot here examine without going too far afield. The sixth age, which saw the advent of mankind, raised certain implicit problems, however: according to the typical parallelism drawn with the six ages of human life, this was the time of old age. In the twelfth century, though, many men and many of the clergy felt themselves to be 'modern'. 'How could modern developments, which did not seem to be nearing their end, be integrated into this scheme?'²⁰ This view of history, useful as a classificatory scheme and a tool for ordering and articulating the past, was also cause for concern and a stimulus to research.

Similarly, the idea that history consisted of transferences made its appearance. The history of civilisations was no more than a sequence of translationes. Two aspects of the notion of *translatio* are well known. First, in the intellectual sphere, there was the theory according to which knowledge was handed from Athens to

Rome, then to France, and finally to Paris, where the most famous university was to grow out of the urban schools: *translatio studii*, which Alcuin had already noted in the Carolingian era.²¹ More generally, historians believed they were observing a movement of civilisation from East to West. Emergent nationalisms were to arrest this progress in a particular chosen country: Otto of Freising in the German Empire, Ordericus Vitalis among the Normans, and, in the fourteenth century, Richard de Bury in Great Britain.²² All these pseudo-explanations (of which our own century has seen others, from Spengler to Toynbee) are significant. In any case they assure a connection between the sense of time and the sense of space, an innovation more revolutionary than is initially apparent, and of great importance for the merchant.

An outline of a positive political economy appears with the *Polycraticus* of John of Salisbury: 'It prefigures the evolution which... would proclaim the autonomy of natural forms, methods of thought, and laws of society... It went beyond the moralism of the 'mirrors of princes' in order to begin a science of power, in a State conceived as an objective body, in an administration based on function rather than feudal homage.'²³ It is significant that, in his organicist conception, the feet of the State, which had to support the entire body and enable it to move, represented rural workers and tradesmen.²⁴

2

And what of the merchant? He had become a man involved in complex and far-flung operations, spanning the Hanseatic region or, better, the Mediterranean, which was dominated by the Italian merchant. His techniques had grown increasingly specialised, and his tentacles stretched all the way from China, visited by Marco Polo, to Bruges and London, where he had established himself or installed his brokers.²⁵

Like the peasant, the merchant was at first subjected by his professional activity to the dominion of meteorological time, to the cycle of seasons and the unpredictability of storms and natural cataclysms. He long had no choice but to submit to the natural order and no means to act other than prayer and superstitious practice. Once commercial networks were organised, however, time became

an object of measurement. The duration of a sea voyage or of a journey by land from one place to another, the problem of prices which rose or fell in the course of a commercial transaction (the more so as the circuit became increasingly complex, affecting profits), the duration of the labour of craftsmen and workers (since the merchant was almost always an employer of labour), all made increasing claims on his attention and became the object of ever more explicit regulation. Coinage of gold was resumed, and new monetary instruments were introduced. Exchange transactions became more complex, due not only to bimetallism and the newly created fluctuations in the commercial price of silver but also to the first 'monetary disturbances', that is, to the first inflationary and, more rarely, deflationary measures. All this enlargement of the monetary sphere required a more adequate measurement of time.²⁶ At a time when the new aristocracy of money changers was supplanting that of the coiners of the early Middle Ages, the sphere of money exchange prefigures the future stock market, where minutes and seconds would make and unmake fortunes.

The statuses of corporations, together with such commercial documents as account sheets, travel diaries, manuals of commercial practice,²⁷ and the letters of exchange²⁸ then coming into common use in the fairs of Champagne (which in the twelfth and thirteenth centuries became the 'clearinghouse' of international commerce),²⁹ all show how important the exact measurement of time was becoming to the orderly conduct of business.

For the merchant, the technological environment superimposed a new and measurable time, in other words, an oriented and predictable time, on that of the natural environment, which was a time both eternally renewed and perpetually unpredictable.

We will cite one illuminating text, chosen from among many.³⁰ In 1355, the royal governor of Artois authorised the people of Aire-sur-la-Lys to build a belfry whose bells would chime the hours of commercial transactions and the working hours of textile workers. The use for professional purposes of a new technique for measuring time is plainly evident. It is the instrument of a class, 'since this particular city is governed by the textile trade,' which shows to what extent the evolving mental structures and their material expression were deeply implicated in the mechanism of the class struggle. The communal clock was an instrument of economic, social, and political domination wielded by the merchants who ran

the commune. They required a strict measurement of time, because in the textile business 'it is fitting that most of the day workers—the proletariat of the textile trade—begin and end work at fixed hours.' This was the beginning of the organisation of work, a distant precursor of Taylorism, which Georges Friedmann has shown was also an instrument of class.³¹ Already, the 'infernal rhythms' can be felt.

The same process responsible for the rationalisation of time was responsible also for its secularisation. More for reasons of practical necessity than because of the underlying theology, the concrete time of the Church, as adapted from antiquity, was the time of the clerics, given its characteristic rhythm by the religious offices and the bells which announced them. This time was determined, as required, by imprecise and variable sundials or, on occasion, measured by crude water clocks. Merchants and artisans began replacing this Church time with a more accurately measured time useful for profane and secular tasks, clock time. The clocks which, everywhere, were erected opposite church bell towers, represent the great revolution of the communal movement in the time domain. Urban time was more complex and refined than the simple time of the countryside measured by 'rustic bells', for which John of Garland, at the beginning of the thirteenth century, gave this fantastic but revealing etymology: '*Campane dicuntur a rusticis qui habitant in campo, qui nesciant judicare horas nisi per campanas.*'³²

Another important change was due to the merchant's discovery of the price of time in the course of his exploration of space. For him, the important duration was the length of a trip. In the Christian tradition, time was neither 'a sort of lining or backing of space nor a formal condition of thought'. We will find later that Christian theologians faced this same difficulty when the introduction of Aristotelian thought at this precise juncture, the twelfth and thirteenth centuries, confronted them with the relation between time and space.

The medieval merchant's simultaneous conquest of time and space deserves greater attention from historians and sociologists of art. In a now classic book, Pierre Francastel has shown how painting and society are connected and what technical, economic, and social pressures can destroy a 'plastic space'.³³ Along with perspective, medieval painting discovered pictorial time. Previous centuries had represented the various elements on a single plane, in

conformity with the view derived from the constraints on both time and space, which excluded both depth and temporal progression. Differences of size expressed only the hierarchy of social ranks and religious dignities. Disregarding temporal hiatuses, successive episodes were juxtaposed, thus constituting a history abstracted from the caprices of time, determined from the beginning in all its phases by God's will. Subsequently, perspective, even if it was only a new schematisation which did not reflect a 'natural' view but rather corresponded to what could be seen by a hypothetical abstract eye, was a visual statement of the results of a scientific experiment and expressed a practical knowledge of space, in which men and objects are reached in successive, quantitatively measurable steps by methods within the reach of human capacities. In a similar way, the painter confined his picture or fresco to the temporal unity of an isolated moment and focused on the instantaneous (which, ultimately, photography would take for its domain), while time, one might say narrative time, was to be found restored in mural cycles. It was in this very area, in fact, that Florentine painting, under the patronage of the merchant aristocracy, displayed its most startling progress. The portrait was triumphant; it was no longer the abstract image of a personage represented by symbols or signs materialising the place and rank assigned him by God, but rather the rendering of an individual captured in time, in a concrete spatial and temporal setting. Art's new function and goal, in fact, was not to capture the eternal essence but rather to immortalise this ephemeral being of the individual in a particular space and time. Thus at a relatively late date, we can still observe a large number of trials, hesitations, and compromises, as well as such delectable fantasies as Paolo Uccello's *Miracle of the Host* at Urbino, where the original treatment of space in the predella also gives the painter the opportunity to dissect the narrative time of the tale into separate episodes, while preserving both the continuity of the story and the unity of the episodes.³⁴

Although the merchant's time was measurable, and even mechanised, it was nevertheless also discontinuous, punctuated by halts and periods of inactivity, subject to quickenings and slowings of its pace. These were frequently connected with technical backwardness and the inertia of natural factors: rain and drought, calm and stormy weather had great influence on prices. Debts came inexorably to term, and yet time was pliable, and it was in this

pliability that profit and loss resided. This was where the merchant's intelligence, skill, experience, and cunning counted.

3

What about the Church's time? For the Christian merchant, this was essentially a second horizon of his existence. The time in which he worked professionally was not the time in which he lived religiously. Where salvation was concerned, he was content to accept the Church's teaching and directives. Contact between these two horizons was merely exterior. From his profits, the merchant withheld God's portion, which went towards good works. Existing in a time which bore him toward God, he was aware that eternity, too, was susceptible to halts, stumbling, and quickenings of its pace. There was a time of sin and a time of grace. There was a time of death to the world before the resurrection. Occasionally, he would hasten it by making a final retreat into a monastery. More frequently, he would accumulate restitutions, good works, and pious gifts against the hour of the frightening passage into the hereafter.³⁵

Natural time, professional time, and supernatural time were, therefore, both essentially distinct and, at particular points, contingently similar. The Flood became a subject for reasoned speculation, while ill-gotten gains opened the gates of heaven. It is important to eliminate the suspicion that the psychology of the medieval merchant was hypocritical. In different ways, the ends pursued in the distinct spheres of profit and salvation were equally legitimate for him. It was this very distinctness which made it possible to pray to God for success in business. Thus in the sixteenth and later centuries, the Protestant merchant brought up on the Bible and particularly attentive to the lessons of the Old Testament would readily continue to confuse, albeit in a world where it had become customary to distinguish them, the designs of Providence with his own prosperity and fortune.³⁶

In some incisive pages, Maurice Halbwachs has asserted that there were as many collective notions of time in a society as there were separate groups, and has denied that a unifying time could be imposed on all groups simultaneously.³⁷ He reduces the individual notion of time to no more than the internalised point of contact of

the several collective notions. It is to be hoped that an exhaustive investigation will someday be made with the intention of showing in a particular historical society the interaction between objective structures and mental frameworks, between collective adventures and individual destinies, and between the various times within Time. This would help to shed light on the very substance of history, and to replace man, the historian's quarry, in the complex fabric of his existence.³⁸ Here, we must settle for sketching the behaviour of the medieval merchant within this multifarious interplay.

The merchant was accustomed to acting in the context 'of durations, so to speak, piled one on top of the other'.³⁹ Neither rationalisation of his behaviour and thought nor introspective analysis had yet habituated him to the harmonisation of his various activities or to the feeling, or the wish, of wholeness. It was actually the Church that opened the way to a unification of conscience through the development of the confession. The Church also contributed to the coherence of behaviour by elaborating a body of canon law and a theologico-moral theory of usury.

This decisive change in Western man's mental structures began in the twelfth century. In a highly developed form, it was Abelard who shifted the focus of penitence from external sanction to internal contrition. Through the analysis of intentions, he inaugurated the field of modern psychology. It was in the thirteenth century, however, that this movement acquired an irresistible force. At the same time, the mendicant orders were discovering a theatre for missionary activity in Africa and Asia—precisely where the merchant had previously found scope for the expansion of his activity—and were pioneering a new frontier in human consciousness. In place of the penitentials of the early Middle Ages, which were guides to extroverted pastoral action based on schedules of sanctions, they introduced confessors' manuals, introverted apostolic instruments oriented toward the discovery of internal dispositions to sin and redemption, dispositions rooted in concrete social and professional situations. For them, the demon took the form not so much of the seven deadly sins as of the countless offences against God that a trade or group might foster in a variety of ways. They closed the merchant's loophole; the time of salvation and the time of business were reunited in the unity of individual and collective life.

It is not within our competence to examine the contribution made

by Hellenic thought at this period to the development of a new approach to the problem of time. This came after a long and hazardous journey in which Arab manuscripts played an important intermediary role.⁴⁰

In a magisterial analysis, Father Chenu reveals how Greek theology, particularly in the work of John of Damascus, beginning in the twelfth century and alongside the various Platonisms and, even this early, Aristotelianisms, gave a serious jolt to Western theology.⁴¹

Traditionally, it will be recalled, the Hellenic conception of time has been contrasted with the Christian. In Oscar Cullmann's terms, 'since the Greeks did not conceive of time as a straight line, the field of action of Providence could not be history as a whole, but only the destiny of individuals. History was not subject to a *telos*. To satisfy his needs for revelation and deliverance, man had no alternative but to have recourse to a mystical conception for which time did not exist, expressed with the help of spatial concepts.'⁴² We know that the Renaissance and, as a modern thinker influenced by Hellenism, Nietzsche rediscovered the Hellenic sense of cyclic time and eternal recurrence. Heraclitean and even Platonistic time, the 'time of pure mobility', would also be rediscovered. The reader will recall Aristotle's definition of time: 'Time is the number of motion.' This was adopted by St. Thomas, according to some authorities with a very different sense, insofar as 'to pass from the potentiality to the act was necessarily in no way temporal.' It seems to us that this opposition has to be attenuated. No doubt, as Etienne Gilson has clearly shown, 'into Aristotle's eternal world, which has its duration outside God and without God, Christian philosophy introduced the distinction between essence and existence.'⁴³ but no more than Bergson was correct in accusing Aristotle of having 'reified' motion, and no more than Descartes was right in mocking the Aristotelian definition of motion, which he judged only on the basis of the caricatural statement in late scholasticism, it is not certain that St. Thomas was unfaithful to Aristotle in seeing motion as 'a certain mode of being', thereby restoring to time both its contingent, yet measurable plasticity and its fundamental essentiality.

In any case, this was the theoretical basis, in theology, metaphysics, and science combined, of a contact between the Church's time and the time of men acting in the world, in history, and, most important, in their occupations.

Even without giving theoretical reasons, a Franciscan like the author of the text cited at the beginning of this essay (see note 2), understood that the traditional opinion that 'time cannot be sold' was unacceptable. The whole practice of the confessional and its canonical elaboration in the thirteenth century sought to give the true justification of the merchant's activity, while circumscribing it within a system of regulations in which religion all too often deteriorated into casuistic moralism. The aim was to keep the merchant's activity within the framework of a tradition for which respect was compulsory. Thus the immutable time of the Old Testament and Judaic thought disintegrated in minor questions and problems of conscience. Condemnations for all the offences which went by the name of usury,⁴⁴ a word with obvious temporal implications, became more flexible—'consideranda sunt dampna quibus mercatores se exponunt et que frequenter occurunt ex hoc quod vendunt ad tempus', says our magister, in a current but revealing expression—and the length of time required in fast, abstinence, and Sunday rest was no longer strictly prescribed but rather, in view of occupational necessities, given in the form of recommendations to be interpreted according to the spirit rather than the letter.⁴⁵

Nevertheless, in the fourteenth and fifteenth centuries, the bankruptcy of the traditional conception of time in Christian theology was to undermine the new equilibrium which had begun to develop in the thirteenth century as a result of the work of theologians, canon lawyers, and moralists under the influence of the mendicant orders. This occurred within the more general context of a reconsideration of *homo faber* imposed by the new socioeconomic factors in the techniques of production—a problem beyond the scope of this essay.

With the Scotists and Ockhamists, time was relegated to the sphere of unpredictable decisions of an omnipotent God. The mystics Meister Eckhart and Johannes Tauler⁴⁶ believed that every duration was mixed indistinctly with every other in a general movement in which each creature was 'deprived of the capacity to obtain the duration which is properly his'.

It is useful at this point to follow Gordon Leff⁴⁷ in observing how fourteenth-century scholasticism encouraged the explosion that was to be the Renaissance of the following two centuries, which was both an unleashing of pent energies and a liberation. Freedman

or tyrant, the Renaissance man who was sufficiently powerful economically, politically, or intellectually could, by using the capacities determined by his *virtù* as Fortune willed, go where he pleased. He was master of his time as of the rest of his existence. Death alone [laid] down a limit. But the living attempted to imagine death before it snatched them away, which led to a new point of view. The end became the point of departure for a reflection in which the decomposition of the body instigated a sense of duration, as Alberto Tenenti has recently shown through new analyses of the *artes moriendi* and the thought of French and Italian humanists.⁴⁸

Later, when quantitative growth had pushed back the merchant's horizons and expanded the arena of his action without fundamentally changing economic structures, the merchant was able to use and abuse time. If he remained Christian, he could not avoid rude confrontations and contradictions between time as he used it in his business and time in his religion without paying the price of mental conflict and practical trickery, for the Church was caught in the old regulations even when it capitulated on the essential issues to nascent capitalism and went so far as to make a place for itself in the new order.

4

This essay has no other purpose than to stimulate a more intensive study of a history which raises numerous problems. Among these problems, one which seems to us of the utmost importance is that of examining the possible impact of the works of the scientific masters of the turn of the fourteenth century on the evolution of ideas about time. The English school, with the Mertonians in the front ranks, has yet to give up its secrets, nor have the Parisian masters of arts, of whom we can make out no more than the inertial mass bulking behind Nicholas d'Autrecourt, Jean de Mirecourt, Jean Buridan, Nicolas Oresme, and Jean de Ripa (recently uncovered⁴⁹ by Abbot Combes), who are themselves poorly known. The critique of Aristotelian metaphysics in these circles, together with mathematical speculation and concrete scientific research, must have given rise to new views concerning time and space. It is fairly well known that kinematics, through the study of uniformly accelerated motion, was transformed by this critique.⁵⁰ This should

be enough to arouse the suspicion that time as well as motion was understood in a new way. Earlier, complementary research in science and philosophy among the Arabs had taken a new approach to the key notions of discontinuity inherited from the atomists of antiquity, which led to a new view of time.⁵¹

Perhaps the connection is closer than has been thought, and certainly closer than the parties involved believed, between the lectures given by the masters of Oxford and Paris and the enterprises of the merchants of Genoa, Venice, and Lübeck in the waning Middle Ages. Their joint efforts may have been responsible for fracturing time and for freeing the time of the merchants from biblical time which the Church was not capable of maintaining in its fundamentally ambivalent form.

NOTES

1. Cf. esp. Henri Pirenne, *Histoire économique de l'Occident médiéval* (posthumous collection, 1951), p. 169.
2. Ms. Flor. Bibl. Laurent. S. Croce Plut. VII, sin 8, f. 351. Cf. Guillaume d'Auxerre (1160–1229), *Summa aurea*, III, 21, f. 225v: 'The usurer acts in contravention to universal natural law, because he sells time, which is the common possession of all creatures. Augustine says that every creature is obliged to give of itself; the sun is obliged to give of itself in order to shine; in the same way, the earth is obliged to give all that it can produce, as is the water. But nothing gives of itself in a way more in conformity with nature than time; like it or not, every thing has time. Since, therefore, the usurer sells what necessarily belongs to all creatures, he injures all creatures in general, even stones. Thus even if men remain silent in the face of usurers, the stones would cry out if they could; and this is one reason why the Church prosecutes usury. This is why it was especially against the usurers that God said: "When I take back possession of time, when time is in my hands so that no usurer can sell it, then I will judge in accord with justice".' Cited by John T. Noonan, Jr., *The Scholastic Analysis of Usury* (1957), pp. 43–4. He points out that Guillaume d'Auxerre was the first to use this argument, which was repeated by Innocent IV (*Apparatus super libros decretalium*, V, 39, 48; V, 19, 6). At the end of the thirteenth century, the author of the *Tabula exemplorum* (ed. J.T. Welter [1926], p. 139) argues: 'Since usurers sell nothing other than the hope of money, that is, time, they are selling the day and the night. But the day is the time of light and the night the time of rest; therefore, they are selling eternal light and rest.' Cf. also Duns Scotus, *In IV libros sententiarum* (Op. Oxon) IV, 15, 2, 17.
3. Invaluable data are found in Giovanni di Antonio da Uzzano, *La pratica della mercatura*, ed. G.F. Pagnini Della Ventura, vol. 4 of *Della decima...* (1766), and in *El libro di mercantantie e usanze de paesi*, ed. F. Borlandi (1936). For example, we

find: 'In Genoa, silver is dear in September, January, and April because of the sailing of the ships... in Rome or wherever the Pope is located, the price of silver depends on the number of vacant benefices and on the Pope's travels, which causes the price of silver to rise wherever he is... in Valence, it is dear in July and August because of the wheat and rice..., in Montpellier, there are three fairs which cause the price of silver there to be very high.' Cited by Jacques Le Goff, *Marchands et banquiers du Moyen Age* (1956), p. 30. For speculation on the rate of circulation of information, cf. P. Sardella, *Nouvelles et spéculations à Venise au début du XVIe siècle* (1949).

4. Cf. G. Post, K. Giocarinis, R. Kay, 'The medieval heritage of a Humanistic Ideal: "Scientia donum Dei est, unde vendi non potest", *Traditio* 2 (1955), 196–234; and Jacques Le Goff, *Les intellectuels au Moyen Age* (1957), pp. 104 ff.
5. Oscar Cullmann, *Temps et histoire dans le christianisme primitif* (1947), p. 35. Gerhard Delling, *Das Zeitverständnis des Neuen Testaments* (1940), cited in Cullmann, p. 35, note 2.
6. Cullmann, p. 32.
7. Ibid., p. 93.
8. Ibid., p. 98.
9. Ibid., p. 111.
10. Ibid., p. 152.
11. On millenarianism, see Ray C. Petry, *Christian Eschatology and Social Thought: A Historical Essay on the Social Implications of Some Selected Aspects in Christian Eschatology to A.D. 1500* (1956), which is entirely theoretical. It is still possible to consult E. Waldstein, *Die eschatologische Ideengruppe: Antichrist, Weltsabbat, Weltende und Weltgeschichte* (1896), and even Tommaso Malvenda, *De Antichristo* (Rome, 1604; 3rd ed., 1647). Gordon Leff has opposed the historian's problems ('In search of the Millennium' in *Past and Present* [1958], pp. 89–95) to the abstract work of Norman Cohn, *The Pursuit of the Millennium* (1957). There are divergent views on the relations between medieval heresies and social classes. The social aspects are minimised by Father Ilarino da Milano, 'Le eresie popolari del secolo XI nell' Europa occidentale' in *Studi greg. raccolti da G.B. Borina* 2 (1947), 43–101 and A. Borst, *Die Katharer* (1953). In the opposite direction there are: G. Volpe, *Movimenti religiosi e sette eretici nella società medievale italiana* (1922), and the Marxist interpretations of N. Sidorova, 'The popular heretical movements in France in the eleventh and twelfth centuries' (in Russian) in *Srednie Veka* (The Middle Ages, 1953), and E. Werner, *Die gesellschaftlichen Grundlagen der Klosterreform im 11. Jahrhundert* (1955). A survey by R. Morghen is to be found in *Medivo Cristiano* (1951), pp. 212 ff., and in the *Relazioni* of the tenth International Congress of Historical Sciences (Rome, 1955), vol. 3, pp. 333 ff. There is a suggestive essay by Charles P. Bru, 'Sociologie du catharisme occitan,' in *Spiritualité de l'hérésie: le Catharisme*, ed. R. Nelli (1953).
12. Georges Poulet, *Etudes sur le temps humain* (1949).
13. Marc Bloch, in *Annales d'histoire économique et sociale*, 1936, p. 582.
14. Henri I. Marrou, *L'Ambivalence du temps de l'histoire chez St. Augustin* (1950). On time in St. Augustine, see, in the collection *Augustinus Magister*, *Congrès international augustinien*, Paris, 21–24 September 1954, 3 vols. (1955), the following articles: J. Chaiz-Ruy, 'La Cité de Dieu et la structure du temps chez St.

15. E. Bernheim, *Mittelalterliche Zeitanschauung in ihrem Einfluss auf Politik und Geschichtsschreibung* (1918); H.X. Arquillière, *L'Augustinisme politique* (1934).
16. Cf. P. Rousset, 'La conception de l'histoire à l'époque féodale', in *Mélanges Halphen*, pp. 623–33: 'The notion of duration and of precision did not exist for men of the feudal era' (p. 629); 'the taste for the past and the need to mark off epochs was accompanied by a desire to ignore time' (p. 630); 'the same sentiment flared up at the origin of the Crusades; the knights wanted to eliminate time and space and to attack Christ's executioners' (p. 631). The author echoes Marc Bloch, who uncovered in the feudal era 'a broad indifference to time' (*La Société féodale* 1, p. 119 [Bloch's work has been translated as *Feudal Society*, Chicago and London, 1961.—Trans.]). On Otto of Freising, cf. H.M. Klinkenberg, 'Der Sinn der Chronik Ottos von Freising', in *Aus Mittelalter und Neuzeit: Gerhard Kullen zum 70. Geburtstag dargebracht* (1957), pp. 63–76.
17. M.-D. Chenu, 'Conscience de l'histoire et théologie,' *Archives d'Histoire doctrinale et littéraire du Moyen Age*, 1954, pp. 107–33; reprinted in *La Théologie au XIIe siècle* (1957), pp. 62–89. See also Etienne Gilson, *L'Esprit de la philosophie médiévale*, 2nd ed. (1948), Ch. 19, 'Le Moyen Age et l'histoire', pp. 365–82. On two 'historians' of the twelfth century, cf. R. Daly, 'Peter Comestor, Master of Histories', *Speculum*, 1957, pp. 62–72; and H. Wolter, *Ordericus Vitalis: Ein Beitrag zur Kluniazensischen Geschichtsschreibung* (1955).
18. M.-D. Chenu, *Archives*, pp. 210–20, 'L'Ancien Testament dans la théologie médiévale'. B. Smalley's work *The Study of the Bible in the Middle Ages* is fundamental. The symbolic aspect of Christian thought in the twelfth century has been treated by M.M. Davy in *Essai sur la symbolique romane* (1955), which stresses only the most traditional aspect of twelfth-century theology.
19. M.-D. Chenu, *La Théologie au XIIe siècle*, pp. 66–7.
20. Ibid., p. 76.
21. Cf. Etienne Gilson, *Les Idées et les lettres*, pp. 183 ff., and P. Renucci, *L'Aventure de l'humanisme européen au Moyen Age*, pp. 138 ff. The Franco-Italian translation studii.
22. M.-D. Chenu, *La Théologie au XIIe siècle*, pp. 79–80.
24. Cf. H. Liebeschutz, *Medieval Humanism in the Life and Writings of John of Salisbury* (1950).
25. For a general view of the medieval merchant, see Y. Renouard, *Les Hommes d'affaires italiens du Moyen Age* (1949); A. Sapori, *Le Marchand italien au Moyen Age* (1952); Jacques Le Goff, *Marchands et banquiers du Moyen Age* (1956).
26. On monetary problems in the Middle Ages, see Marc Bloch, *Esquisse d'une histoire monétaire de l'Europe* (posthumous, 1954); C.M. Cipolla, *Money, Prices, and Civilisation in the Mediterranean World, Fifth to Sixteenth Centuries* (1956); T. Zerbi, *Moneta effettiva e moneta di conto nelle fonti contabili di storia economica* (1955); R.S. Lopez, *Settecento anni fa: Il ritorno all'oro nell'Occidente duecentesco* (1955).
27. Cf. J. Meuvret, 'Manuels et traités à l'usage des négociants aux premières époques de l'âge moderne,' *Etudes d'Histoire moderne et contemporaine* 5 (1953).
28. Cf. Raymond de Roover, *L'Evolution de la lettre de change* (1953).

29. Cf. R.H. Bautier, 'Les foires de Champagne: recherches sur une évolution historique', *Recueils de la Société Jean Bodin: la foire* (1953), pp. 97-147.
30. Published by J. Rouyer, *Aperçu historique sur deux cloches du beffroi d'Aire: la bancloque et le vigneron* (P.J.L.), pp. 253-4; G. Espinas and H. Pirenne, *Recueil de documents relatifs à l'histoire de l'industrie drapière en Flandre I* (1906), 5-6.
31. Georges Friedmann, 'Frederic Winslow Taylor: l'optimisme d'un ingénieur', *Annales d'Histoire économique et sociale*, 1935, pp. 584-602.
32. On the measurement of time and clocks, there are interesting ideas to be found, but often requiring further study with more precise data, in Lewis Mumford, *Technics and Civilisation* (1934), pp. 22 ff.; an excellent sketch is found in Renouard, pp. 190-92. It should be pointed out, in any case, that decisive progress in this area was to come only after the beginning of the sixteenth century. A.P. Usher nevertheless is exaggerating in the opposite direction when he states: 'The history of clocks prior to the sixteenth century is largely a record of essentially empirical achievement', in *A History of Mechanical Inventions*, 2nd ed. (1954), p. 304. Cf. A.C. Crombie, *Augustine to Galileo: The History of Science, A.D. 400-1650*, 2nd ed. (1957), pp. 150-51, 183, 186-7. From a vast literature, we will single out F.A.B. Ward, *Time Measurement* (1937), for its documentation, and the popularisation of F. Le Lionnais, *Le Temps*, for pleasure of reading. The quote from John of Garland is taken from his *Dictionarius*, (Geraud ed.), p. 590.
- It is well known that psychologists have stressed that the child acquires his spatial and temporal notions concomitantly. See Jean Piaget, *Le Développement de la notion de temps chez l'enfant* (1946), pp. 181-203; P. Fraisse, *Psychologie du temps* (1957), pp. 277-99; P. Malrieu, 'Aspects sociaux de la construction du temps chez l'enfant', *Journal de Psychologie*, 1956, pp. 315-32.
33. Pierre Francastel, *Peinture et Société: naissance et destruction d'un espace plastique: De la Renaissance au Cubisme* (1951).
34. On the relations between theatrical representations and Uccello's painting, cf. P. Francastel, 'Un mystère parisien illustré par Uccello: le miracle de l'hostie d'Urbino', *Revue archéologique*, 1952, pp. 180-91.
35. For examples, see especially J. Lestocquoy, *Les Villes de Flandre et d'Italie sous le gouvernement des patriciens (XIIe-XVe s.)* (1952), pp. 204 ff.: 'Les patriciens et l'Evangile.'
36. We are aware of the fact that recent detailed studies are leading to considerable modification and correction of the classic theses of Max Weber, *Die protestantische Ethik und der Geist des Kapitalismus* (1920), and of R.H. Tawney, *Religion and the Rise of Capitalism* (1926).
37. Maurice Halbwachs, 'La mémoire collective et le temps', *Cahiers internationaux de sociologie*, 1947, pp. 3-31.
38. Robert Mandrou has pointed out (*Annales*, 1960, p. 172) what the requirements of the historian are and has recalled some old suggestions of Marc Bloch, in connection with recent works of philosophers relatively unconcerned with concrete history.
39. Poulet, p. vi, echoing Duns Scotus, *Questiones quodlibetales* q. 12.
40. Besides general works on the history of philosophy and the sciences, the reader may consult, on the role of the Arabs, A. Mieli, *Panorama general de historia de la ciencia*, vol. 2, *El mundo islámico y el occidente medieval cristiano* (1946); and F.

- Van Steenberghen, *Aristotle in the West* (1956). On one particular point: E. Wiedemann, *Über die Uhren im Bereich der islamischen Kultur* (1915).
41. M.-D. Chenu, *La Théologie au XIIe siècle*, Chs. 12 and 13, 'L'entrée de la théologie grecque et orientale', pp. 274–322.
 42. Cullmann, p. 36; cf. L. Laberthonnière, *Le Réalisme chrétien et l'idéalisme grec* (1904); and J. Guitton, *Le Temps et l'éternité chez Plotin et chez saint Augustin* (1933).
 43. Etienne Gilson, *L'Esprit de la philosophie médiévale*, 2nd ed. (1948), p. 66. See the whole beginning portion of Ch. 4, 'Les êtres et leur contingence', pp. 63 ff.
 44. Cf. G. Le Bras, art. "Usure," in *Dictionnaire de théologie catholique* 2, part 2 (1950), cols. 2336–72; B.N. Nelson, *The Idea of Usury: From Tribal Brotherhood to Universal Otherhood* (1949); and Noonan.
 45. Joannes Andreae (1270–1348), professor of canon law at Bologna, in his treatise *De regulis juris*, art. 'Peccatum', 12 (cited by Noonan, p. 66), states that the argument according to which time cannot be sold is 'frivolous', for many contracts include a period of time without implying a sale of time. The mechanism of commercial transactions was therefore known to the doctors after this date, and understood by them in a properly technical sense.
 46. M. de Gandillac, *Valeur du temps dans la pédagogie spirituelle de Jean Tauler* (1955).
 47. Gordon Leff, 'The fourteenth century and the decline of Scholasticism', *Past and Present*, no. 9 (April 1956), pp. 30–41. *Id. Bradwardine and the Pelagians* (1957).
 48. Alberto Tenenti, *La Vie et la mort à travers l'art du XVe siècle* (1952); and *Il senso della more e l'amore della vita nel Rinascimento* (1957), Ch. 2, 'Il senso della durata', pp. 48–79.
 49. Abbot Combes (ed.), *Conclusiones de Jean de Ripa*, critical text with introduction and notes (1956).
 50. The most recent bibliography is to be found in Crombie, pp. 414–6. See also the works of M. Clagett, A. Koyné, A. Maier, and C. Michalsky. In addition, the studies of G. Beaujouan and his sketch in *Histoire générale des sciences*, vol. 1, *La Science antique et médiévale*, ed. R. Taton (1957). On the origins of this current, see H. Shapiro, 'Motion, Time, and Place according to William Ockham', *Franciscan Studies*, 1956.
 51. S. Pines, *Beiträge zur islamischen Atomenlehre* (1936), and 'Les précurseurs musulmans de la théorie de l'impetus', *Archeion*, 1938.

ABBREVIATIONS

<i>Annales ESC</i>	<i>Annales: Economies. Sociétés. Civilisations</i>
<i>CSEL</i>	<i>Corpus scriptorum ecclesiasticorum latinorum</i>
<i>DACL</i>	<i>Dictionnaire d'archéologie chrétienne et de liturgie</i>
<i>MGH, AA</i>	<i>Monumenta Germaniae Historica, Auctores antiquissimi</i>

<i>MGH, Script. rer. Lang.</i>	<i>Monumenta Germaniae Historica, Scriptores rerum Langobardicarum</i>
<i>MGH, Script. rer. Mer. (MGH, SRM)</i>	<i>Monumenta Germaniae Historica, Scriptores rerum Merowingicarum</i>
<i>Ottob. lat.</i>	<i>Ottoboniani latini</i>
<i>PG</i>	J.-P. Migne, <i>Patrologiae cursus completus, series graeca</i> , 162 vols. (Paris, 1857–66)
<i>PL</i>	J.-P. Migne, <i>Patrologiae cursus completus, series latina</i> , 221 vols. (Paris, 1844–64)