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Measuring the Value of Things in the Middle Ages

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A French version of this text has been read in Torino in 2012 at a "Round table" organised by the European Research Council program SAS (Signs and States), about the notion of "value" in the Middle Ages.

The difficulty of understanding the value of things in the Middle Ages is one of the obstacles to our understanding of economic life in that era. The issue is first of all associated with the ways medievalists quantify and use numbers. Value was first investigated when studying prices in the 19th century, as a prerequisite to any knowledge of the economy. This avenue, explored by major researchers like J. Thorold Rogers and d'Avenel in the 1880s-1890s, reached its apogee in the 1930s with the extensive investigation launched by Beveridge (Dumoulin, 1990). It has been ignored over the last decades, while economic history was losing ground in the eyes of French medievalists. For some twenty years their researches and their reflections turned rather to gualitative data wherein the issue of nonmercantile exchange, of donation and its economy, has gained a more prominent position than the study of mercantile exchange, initially considered as research on prices and values, or the relations between things (Testart 2001). This evolution is well known, if not always explained and understood thoroughly (Feller 2011a). It is supported by a number of methodological assumptions which make more complex the study of an economic history which specialists now wish to embed in a social context. I would like to stress that this viewpoint is short-sighted. The main focus since then has been the study of the relations between people through things. The aim is to include the understanding of the value or price ratios established between things into the latter. The study of prices in the long- or short-term, carried out by comparing the factors or the functions of supply and demand, should not be considered in any way incompatible with the study of social determinants interfering with pure market mechanisms. On the contrary, the former combine with the latter as part of their expression. This combination does, however, admittedly undermine the understanding of the processes at play in their formation. Not only the measurable, econometric data, but also describable and accessible but nonquantifiable facts should be integrated into the equation (Feller/Gramain/Weber 2005). Consequently, although measuring value is a challenge and its resolution may throw light on many aspects of economic life, It is not an exhaustive description and It is also necessary to explore the procedures involved when objects are exchanged, such as conversion systems, to better grasp the reality of exchanges. In the same spirit, I would like to present here a few reflections on the measurement of values, on prices and counterparts, mainly but not only, during the early Middle Ages.

Mercantile exchange and nonmercantile exchange

Exchanges, regardless of their aim and of whether or not they are commercial, depend on an accurate knowledge of the corresponding items owed or expected by each of the protagonists. Any transaction, regardless whether it is a market transaction, is based on the knowledge of the value of the goods to be exchanged and the establishment of a comparison scale between them (Testart 2001a, 2012). The context and the result of the latter guide decisions in how to settle the exchange. A transaction can be offset in money or in kind and, in the latter case, using any type of objects, from cattle to grain, pepper to iron, considered as equivalent to what is offered. The measurement of value, the comparison between what is offered and what is obtained in exchange, always takes place, at least implicitly. The actors must know what they have given and what they have received and can determine with relative accuracy whether they owe or are owed anything, whether they have received more or less than what they have transferred, who is creditor and who is debtor. This awareness leads to the building of complex relationships between individuals potentially including relations of dependence or subjugation through credit when that is indeed at the heart of the relations between individuals. The relations between things, constructed through the assertion of values, contribute to the establishment of relations between people, of friendship or of dependence.

The value in question must be equally known, at least intuitively and approximately, so as to form the basis of

structured social relationships. The way it is expressed and measured is however highly variable and often difficult to interpret, particularly as resorting to equivalents does not always involve the expression of a monetary value. This is made more challenging since medieval documentation only rarely provides the background necessary to understand of what is at stake in transactions.

Goods and products are in circulation and counterparts are offered to compensate for them in exchange; the loss of goods is balanced out by the acquisition of other goods. However, if in our modern lives everything is settled through money since it is the equivalent of all things, enabling both the measurement of value and the offset of and exchange, the situation is completely different in ancient economies. Measuring operations as well as payments are often, if not always, affected by a number of factors. These factors may be associated with existing relationships between the transacting parties before the exchange, which are only rarely market relations. They are also linked with the intent of the action of exchange as well as the availability of means of payment. Finally, they relate to the diversity of the measurement units, which is one of the salient features of the ancient economy (Testart 2011). The ubiquity of these factors was such that the use of money to measure value, although frequent, was neither compulsory nor necessary.

The issue of the category of exchange, specifically the opposition between mercantile exchange and nonmercantile exchange, is at the heart of the problem. Whether goods are exchanged against other goods or against money, there is no guarantee that each of the parties considered seeks to gain immediate material profit . The entanglement of economic relations with social relations may be such that market exchange cannot account for what actually takes place between the vendor and the purchaser at the time of the sale (Polanyi 1983; Humphreys 1969). The junction of a supply and of a demand leading to the formation of a price, itself adjusted by a monetary payment, is not sufficient to account for the amount and the means selected to settle it. At the same time, prices are stated and their payment closes a sequence or terminates an exchange. Consequently, we must consider that the management of rarity, the allocation of available resources, the arbitrations performed by the agents in favour of such or such good or of such or such action, are just as important in the process of formation of prices as the social determinants of the transaction (Arnoux 2009; Lévi-Strauss 2001; Weber 2005). No more, no less.

In this sense, the value of things seems impossible to measure. It is part of the field that can not be ascertained by searching for regularities. The unit price of a plot of land may seem unreliable because its sale includes a collection of facts which underpin the the processes through which the parties have agreed on a price and on the objects required to pay it off. G. Levi had thus shown that, at the end of the 17th century, in Piemont, the sale of the plots of land only took place upon the completion of a relation which was first of all a relation of credit (Levi 1989). The transfer of property for value consideration only happened when it was necessary to cover debts: the price demanded and paid integrated the whole process which had taken place thus far and which was closed by the final transaction, establishing an exchange for the settlement of all outstanding claims. Studies relating to the sale of real estate during the early Middle Ages have also been used to single out different cases which lead to price variations for the same object or the same surface area: a sale may mask a new customer, in which case the price may be vastly overstated, since the aim is to obtain services and friendship, not to acquire land. Such a transaction may serve to seal a friendship or prepare the inheritance transfers accompanying a wedding. The price stated and paid may then be low since there again the effective trading differs from what it appears to be initially (Feller/Gramain/Weber 2005; Testart 2001a: 731,735).

In this case, the regularity should be sought somewhere else than in the relation existing between the usage value and the exchange value of the object, or between its intrinsic value and the final price obtained for it. Rather, the regularity can be found in the amounts which have circulated between the purchaser and the vendor prior to the sale, and in the history of loans and refunds which, carried out or deferred, lead to a situation where a sale is the only option. But the sale price does not provide any indication of the value of the good transferred: to understand this value, we must to be able to trace the entire chain of obligations contracted by the parties, which is often all but impossible, but may sometimes be attempted.

Knowledge of the value of a good is a knowledge shared among the different actors. These actors perform on several levels at the same time, making it necessary sometimes to use quantitative estimates in order to measure the object transferred, to assess its value and to understand that of the counter-offer, and sometimes it is not. The instruments of assessment and of payment

The first item to examine is the instrument of exchange: it enables us to know which context we are in.

The systematic use of money is not necessarily the rule, as mentioned above. Exchanges may be paid off in kind and different systems can coexist. The best known system was that explored some time ago by Jean Gautier-Dalché and recently re-examined by Wendy Davies (Gautier Dalché 1969; Davies 2002, 2007, 2010). It relates to a peripheral region, Galicia, which was confronted with specific economic problems due to its boundary position. The investigation relied exclusively on written documents recording market-related transactions, i.e. sales in which a pretium, a price, was mentioned. It concerned the period from 900-1000 C.E. In the Galician documents, sale language is different from donation language, and the absence of a mention of price invalidates the transaction. There are therfore two levels, that of mercantile exchange where things are described, measured and assessed and that of non-mercantile exchange where the value is not necessarily mentioned.

Florence Weber, Agnès Gramain and myself have made analogous observations on a dossier of Abruzzese documents dating from the 850s-880s. Following the methodology recommended by Florence Weber, we have distinguished the acts wherein the goods exchanged, land, gave rise to a precise description, with a measurement of the surface area, listing of the limits and mention of a pretium, from those in which the surface area was not given but where a *pretium* was nevertheless fixed (Weber 2005; Feller/Gramain/Weber 2005: 73-91). In the latter case, whether the payment was made in money or in kind or as a mix, we thought it appropriate to mention a *counterpart* in the exchange, since, in spite of the appearances, the sale of the land may not always have been a commercial transaction. The files in our possession showed that the transfers of plots of land for value consideration could indeed mask new customers or other transactions, such preparing weddings and hence settling the guestion of dowries, or possibly covering debts (Feller 2002). It seems like if the distinction between sale and donation was less accurate in the Abruzzi than in Galicia.

Under these conditions, the nature of the objects used to offset the exchange becomes crucial. In Galicia, the price consists of clothes, of breeding products, and sometimes gives rise to an assessment in silver solidi. This varies by chronology and geography: in Sahagun, in the centre of León, up to around 930, assessments and payments were made using clothes and agricultural products. After that date, the prices were expressed in solidi, but not necessarily offset in money. Conversely, a few dozen kilometres from Sahagun, in the archives of the Cardeña monastery in the East of León, the transactions express values in solidi before 930 and after 960. During the decades 930-950, the transacting parties resorted to manufactured objects (Davies 2002: 155-159). However, the moneys mentioned, essentially "solidi", are not in cash, but in reporting currencies: when gold or silver appear, they play the same part as the other objects, valuable or not, represented in the payment, and do not act as the equivalent of objects. Money here is used as one of the elements present in complex bartering procedures. On the other hand, the objects used in the exchanges by the Galicians are quite numerous. In three guarters of the cases they used agricultural products: drinks, bread, grain or cattle. Horses, oxen, mules, goats and donkeys are represented in transactions which thus include the traction and portage instruments. The working context is never far away. Manufactured objects are a little scarcer, but the price lists also include silver plates, precious swords, wax or silken clothes, and belts. These apparently heteroclite lists provide indications on the aims pursued by the transacting parties: the provision of objects of domestic use, associated with prestige or work, is certainly part of what they were looking for.

The Abruzzi offer, for the prior period, similar lists (Feller 1998a: 361-385). We suspect that these prices are not there solely for their exchange value and were not simply substitutes for money. They admittedly express a measurable, and often a measured, value. But their presence in the exchange also has a classification effect: transferring a plot of land in exchange for a goat or a draft animal does not have the same meaning as transferring it for a horse or a valuable sword. The objects changing hands should be considered not only as a function of their value but also as a function of their particular status and what that conveys. The common features of these operations are clear: the plot of land transferred in exchange for a movable property which acts as a store of value; the transfer is a form of realisation of an asset. But the need to sell, to dispose of a property object which is also a production factor, is not the same if we wish to obtain money, a draft animal, a weapon or a war animal in exchange. We can also see that the holder of valuable or sought-after objects, by transferring them against plots of land, exerts a protective function, giving a good whose transfer may appear as a modality of its patronage, in return for a plot or a farm business. Providing draft animals to a customer without the latter having to run up debts with the seller may express the protection that the patron exerts on the customer and is also a relatively versatile form of expression of social domination.

Such situations appear more clearly in the cases where the transactions are obviously not commercial, as in the file of Bishop Meinwerk of Paderborn, the main elements of which date back to the beginning of the 11th century (Reuter 1995; Feller 2013). Land gifts are not free but require the transfer of objects, whose value may be significant. Sometimes, this transfer is accompanied by foodstuff incomes paid annually to the donors. The exchange is here ambiguous, since it mobilises values, represented by guantities of non-negotiable gold, furs, weapons, victuals, and plots of land: it is not possible, in this case, to tell whether the quantities exchanged have a common measure or not. This information obviously did not present any interest for the transcribers of the extraordinary series of exchanges inscribed in the bishop's documents, a text whose status is close to gesta episcoporum. The exchanges are presented in this file as different from transactions; rather, they are described as successive donations inspired by the piety of the secular donors, who transfer their plots of land, and the benevolence of the bishop, who gives portable goods, not so much in return nor specifically because of the donation, but voluntarily. The manipulation of these acts in the document - which has some features of the cartularies leads to a succession of transfers without avowed economic aim. We can see clearly what is happening: guite often, after transferring a plot of land, the donators benefit from an income or their properties are transferred back on a temporary basis, with the addition of other plots of land. They have in fact contributed in order to consolidate their annuity, transferring their capital in whole or in part either by obtaining an annuity or by consolidating their exploitation (Feller 1999; Morelle 1999; Manzano 2013).

That case is extreme. Usually, in cases involving men and women not belonging to the high aristocracy, objects are assessed based on accounting units. For northern Spain, we know that money was minted until the 11th century and that the circulation of foreign coins was a marginal economic factor, mainly linked with the presence of pilgrims (Davies 2002; Manzano 2013). Consequently, the payments specified in solidi were made most often in kind, as in central Italy, where the payment in res valentes was mentioned the most frequently: *de mea mobilia valente tot* or *in appretiatum valente tot* were the most frequent mentions in the payments (Feler 1998b).

Having said that, things are not necessarily that simple: the solidus, in Spain, can refer to a silver weight measurement at the same time as a monetary accounting unit. By extension, the solidus was also a reference for all sorts of objects which could serve as a means of payment. Thus, the texts mention *vaccae solidares* or *boves solidares*, cows or oxen worth a solidus. Volumes of corn could be used as means of payment and as a monetary assessment tool. This enables us to deduce for Galicia the existence of several parallel assessment scales: the high values are expressed in solidi, the middle values in volumes of grain, the smaller values in cattle (Davies 2002; Gautier Dalché 1969).

So there exist, even in a society poorly provided with currencies, systems for measuring the value of things accurately, using material objects of daily life, but linking them always, in the background, to a monetary value, which was fictitious inasmuch as currencies do not circulate, or at least not at the social levels that the written documentation enables to reach.

The substitution of objects with currencies is therefore common, either because the transacting parties want to give the exchange a particular meaning or because monetary substitutes are economically necessary. The absence of available cash in the early Middle Ages has been established archaeologically and which created significant problems.

The monetary reform of Charles the Great at the end of the 8th century supposedly made available to the public a means of assessment and of payment: the multi-purpose denarius (Toubert 1988; Grierson 1976). In certain regions, this is can indeed be noted. Thus, the file of the acts of Totone di Campione, in the region of Milano, which is particularly captivating because it relates to a family documented over an exceptionally long period (from 720 to 820), shows the transition of the Lombard monetary system over a few years. In the first decade of the 9th century, the prices were stipulated in denarii and paid with that currency, which was therefore in circulation (Rovelli 2005). Conversely, the archaeological excavations, especially those performed in Rome in the last decades of the 20th century, are characterised by the almost total absence of monetary findings for the period from the 5th to the 11th century (Rovelli 1993, 2000; Delogu 2007). The large Roman excavations of the Crypta Balbi were conducted in an exemplary manner and it is inconceivable that the archaeologists have ignored a material as important as currencies, whether in the form of entire coins or fragments of coins detected with a sieve. The Crypta Balbi, on the other hand, can be found in an area of permanently habitation, though admittedly of varying density, where activities of transformation and of exchange unfolded continuously during the relevant period (Sagui 1990; Manacorda 2001). Nevertheless, no money was found representing the Carolingian or Ottonian period. The same goes for the Confession of Saint-Peter, also excavated, which has not delivered any monetary item from the 9th-11th centuries, as would have been expected. The explanation lies, for the numismatist who focused on this problem, in the legal tender capacity of the denarius in Italy. Contrary to what is generally accepted, it was a coin with high liberatory power and hence difficult to mobilise for daily purchases. It was supposedly only used for large payments, notably admission fees to acquire a tenure and land purchases: such is at least the reason put forward to explain that no coin was lost in premises where they could have been mislaid easily. The means of payment for daily life exchanges would not be monetary cash but different forms of payment.

This observation should be put in the monetary context of the early Middle Ages, when payments in ingots estimated by their weight on the one hand and barter on the other hand were frequent, even in economies where commerce was developed. Since the 1980s, significant attention has focused on the prominence of scales and weights found, most often in fragments, on sites excavated in Northern England and Ireland, in areas occupied by the Vikings in the framework of their mercantile exchanges (Kruse 1988). It is possible to imagine that, in the absence of means of monetary payment properly speaking, economies largely based on mercantile exchange nonetheless developed thanks to objects which could be substituted for minted currencies. Precious metals, providing that their value is known and the weights are accepted by the parties, have a monetary usage and may be substituted for minted currencies, which may partially explain the relative rare mentions of currency as payment in early medieval sale documents. The use of these metals, however, creates the same problems as conventional means of payment. The weight had to be measured and that the final quantity had to be known as well; a guarantee was required for the weights and measures as well as for the quality of the precious metal weighed. This was finally part of the sovereign's role, regardless whether the latter was a lord or the king. The absence of a metrology which was perfectly reliable had to render transactions difficult in cases when ingots were weighed. Consequently, the use of precious or simply desirable objects, even to settle small purchases, is logical and provides an immediate and more practical solution for exchanges.

Moreover, a whole economy resting on the one hand on deferred payments and on the other on barter up to the modern era. The use of cutting sticks, for example, is a form of practicing credit and recording debts to defer payment: it has been shown to exist very well in the early Middle Ages (Kuchenbuch 2006; Clanchy 1979). Credit in different forms obviously exists and is recognised as a necessity of economic life (Bougard 2010): it enables economic actors to remedy the lack of liquidity and to engage into operations to anticipate harvests or to invest in infrastructures (Feller 2008a). Economic life was, even then, somewhat sophisticated, and its agents mastered its fundamental techniques. They knew how to defer payments. They also knew how to perform conversion operatations which were neither rudimentary nor primary. These techniques, present as of the Carolingian era, were diffused and refined until they reached the degree of perfection they exhibited at the end of the Middle Ages.

It is thus possible to dispense with cash, at least up to a certain extent. This is in the context of the economy of the early Middle Ages, in which actors pursued different goals according to their social positions or circumstances (Grierson 1959).

Converting goods, knowing their value

Here we should distinguish social levels and consider the actors' intents.

I shall take two examples from the Correspondence of Lupus of Ferrières (Noble 1998). He needed lead to improve the roof of the abbey of his monastery. Consequently, he sent a delegation to the King of Wessex, requesting a gift of the quantities of metal necessary. He promised in return to pray for the salvation of the sovereign's soul and sent his serfs to Quentovic to collect the metal, near the mouth of the Canche where it was unloaded (Levillain 1927: 70-74). This transaction obviously had nothing to do with mercantile exchange. We are here in the presence of an asymmetrical exchange wherein a measurable material good, a certain quantity of lead, is exchanged against another, invaluable, the monk's prayers, within a system which operates on several planes: what was exchanged in these cases did not correspond in kind nor in value to what was given. At stake are the donation of a certain quantity of metal and the salvation of the king's soul. The monk's prayer is the medium enabling the transformation of the donation of metal into an instrument of the king's salvation. We are dealing with a true conversion of a valuable material object into a good whose counterpart in the exchange is infinite, prayer for salvation. The counterparts obtained by each of the actors has no commercial value. It was not truly an exchange but rather a conversion of an object with a commercial value (lead) into another value in terms of salvation (prayer). The game of actors thus takes place on two planes, both economic and spiritual. Both parties aquired something of a value. But the value is not the same: the exchange functions without requiring a material medium. What is at stake here is the competence of the monks to carry out transactions based not on the exchange of values but on their conversion (Toneatto 2012). We are not dealing with a system of exchange of donations any more than with a commercial system, but with another in which the transformation of one type of thing into another is essential to establish relationships between people and institutions. The concept of value is then upgraded to a capacity to incorporate into material goods elements which are neither quantifiable nor measurable.

Exchanges between monasteries and the secular persons do not always take place this way. They are deeply ingrained in the real economy, where valuable things circulate and are exchanged against a price, regardless of the form of payment. Shortly before the operation we have just described, Eginhard, also wanting to cover with lead the roof of the abbey of Seligenstadt, had to commit himself to pay 50 pounds of silver to acquire the metal, as part of a true commercial transaction involving the preparation and the exchange of letters of intent binding both parties, Eginhard to pay and the owner of the metal to deliver it (Eginhard, Correspondance: 36). The exchanges between lay and religious institutions may thus occur in different logics, sometimes privileging the search for salvation in the context of a Christian economy, sometimes the search for material goods (logna-Prat 2011).

Lupus of Ferrières is particularly interesting for the observer of economic life: he deserves some attention. He ran his monastery outside any form of exchange economy, as if self-reliance, which constitutes the monastic ideal, meant that he did not want to buy anything nor to sell anything. Thus, in several of his other letters, he informed his readers of the difficult situation of Ferrières. He complained that the loss of his dependence on Saint-Josse deprived the monastery and its monks of its normal supply of clothes and of food (Levillain 1927: 181, 191). He could not face the collection of charges which, in addition to the maintenance of the monks and the reception of the guests, the annual donations to the king. He consequently had to buy corn on a regular basis and the brethren were frequently compelled to feed on vegetables instead of bread. They were obliged any longer to wear patched-up clothes. Saint-Josse did not supply an income but did provide objects. In 845 during a famine, Loup even had to sell a few sacred vases to feed the community and his familia. He did not loan but was compelled to de-stock, and his treasure was not in monetary form. The purchase of food commodities seemed to him to a an abnormality, although even the rule of saint Benedict always offered the possibility of resorting to the market, either to buy what the monastery did not produce or to sell what he had in surplus. Obviously, on this particular point, Lupus did not conform himself to the representation of a good abbot, at least in his economic practice. According to saint Benedict rule, in effect, among the qualities of the abbot, we find a capacity to assess the value of things as well as of acts and, by extension, of the men carrying out the acts. The abbot was the one who, because he understood their value, could convert the terrestrial things into spiritual benefits, acting on several planes as a true "banker of God" (Toneatto 2010, 2012). The monks in general appear as true virtuosi of this particular operation and this arrangement is similar to their managerial capacities, whereas the same spiritual and intellectual qualities, discretio, diligentia, cura, sollicitudo, could be found with managers of material commodities as well as pastors. The functions of spiritual and temporal management of the monasteries are here largely converging if not confused: being able to assess the value of things is not so far from the operation which enables one to ascertain the value of acts (Toneatto 2012: 299-342 ; Devroey 2006 : 576-577).

The capacity for assessment exhibited by the best abbots of the early Middle Ages is on a par with their capacity to manage their domains according to the information available which, though often scarce and incomplete, enables rational decisions. Their knowledge does not lie only on a spiritual plane, but also includes practical know-how which enables them to enumerate the men, plots of lands and royalties so as to make decisions relating to the structure of the abbey's possessions in a rational way. The polyptychs thus appear to be the fruits of a convergence between the political will of the Carolingians, a reasoned application of the Rule of Saint Benoit, which ordered the abbots to give written accounts, and the capacity of members of the aristocracy of the 9th century to grasp things through the use of numbers. The latter is accompanied by a clear awareness of the concrete functioning of economic life, of the organisation of production and of the building of incomes.

Going into further detail, we can see that certain economic and financial mechanisms have been assimilated perfectly, possibly intuitively, by the actors of the 9th century. A classic example is the description, by the bishops gathered into a council in Paris in 829, of a downward speculation. In order to define what immoral gain is (turpe lucrum), they imagine a loan in grains made during an expensive period. A borrower who cannot pay cash commits to refunding in kind the following year, not by volume but the value of corn at the moment of the loan. In other words, if he bought a muid of grain worth two denarii in 829, he did not repay a muid in 830, but what two denarii would buy at that time. The gamble of the lender is that, if the 830 harvest is good, prices may decrease and the debtor may be compelled to give a much greater quantity of corn than what he obtained in 829 (Feller 2011b).

Another example is supplied by the way Adalhard of Corbie, in Northern Italy in 813, assessed the value of two plots of land by including all the factors enabling him to do so: surface area, but also fertility, remoteness from the town, distance to a means of communication, relative value of the buildings for exploitation. This rare case shows a Carolingian aristocrat in a situation of expertise: he per they want to do. Thus, in the exchange of 813 noted above, Adalhard introduced arbitrary modifications into his assessment criteria (while explicitly noting he was doing so) so as to "finalise" his case and to make possible the permutation of property. When he requested the average unit price of a plot of land near Brescia and near Nonantola, price ranges were suggested to him. In one case, the maximum price of the jugerum is five solidi (i.e. denarii), and in the other it is eight denarii. If we find the arithmetic ratio existing between the maximum prices, we arrive at a multiplying coefficient of 7.5. At the highest price, a jugerum of land near Brescia is worth 7.5 times that of land near Nonantola. Evidently, accepting this ratio would have established an excessive distortion between the surface areas in question. Adalhard modifies the prices arbitrarily so that he reaches a ratio from one to three: he therefore assesses the surface unit

near Brescia at three solidi (36 denarii) instead of five and near Nonantola at one solidus (i.e. 12 denarii) instead of eight. We thus arrive at a ratio from 1 to 3, which corrects the inequalities caused by the functioning of the market, but which implies an assessed 60%-price decrease for the plot of Brescia and a 66% increase for that of Nonantola (Bougard 2008). This is still a sophisticated game of proportion: to arrive at a ratio from 1 to 3, 2/3 of the value should be increased and decreased. We shall not dwell on figure 3, but rather highlight the arbitrariness of the abbot who, knowing the market prices and integrating the elements contributing to its formation, decides to leave them aside and establishes a fictitious harmony by playing with the values, which enables him to say under what condition the surface areas in question can balance each other out and thus be exchanged. Playing with words, we can say that the exchange value is here voluntarily disjointed from the market price: the aim is however to interchange two pieces real estate belonging to ecclesiastical institutions and, in this case, the notion of market price has no relevant bearing. The notion of fairness, conversely, should be respected at all costs. The value, therefore, is but one of the aspects of the question and probably not the main one.

It happens that the observations of the actors on the value of things are simply common sense, even if they inform on important management decisions. Thus, in the 12th century, the monks of Cluny knew perfectly what they had to do to manage their supply rationally. Rather than organising costly cart transport from the peripheral domains to the abbey, they sold the products of their remotest dependences and, with the money obtained, bought the goods which they may need and which would not be produced close to the abbey (Duby 1973). The ideal of self-reliance is here combined to an intelligent use of the market and a fine awareness of what prices are. The administrators of Cluny understood how to compare costs and integrate transport in their calculation of the costs of the foodstuffs they consumed and of the clothes they wore. We are here in a monetary economy, far from the type of exchanges practiced by Loup de Ferrières and undoubtedly quite close to the ways of the speculators of the 9th century.

The vocabulary used by the authors illuminates their reasoning. Adalhard, for example, often justifies what he is doing and cites, even in the acts of practice, *opportunitas*, *utilitas* and *ratio*. Frequently, on the other hand, he reasons in terms of *quantitas* and of *qualitas*, seeking to establish a link between both, logically involving figures and, quite often, currency. We have just seen that conversions may entail a degree of arbitrariness: *discretio*, one of the main qualities of an abbot, effectively enables him to set a price or to establish the link existing between two things of the same or different nature. He knows the value of things, but also how to assess and how to act according to their usefulness. Accordingly, the actor may choose to realise an operation or not, whether it is a commutation of goods or a mercantile exchange.

We said above that monks were like the "bankers of God" and that they acted as virtuosi of conversion. This should also be understood literally. The game between payments in kind and payments in money, as well as the central issue of the functioning of markets in the supply of towns via the seigniorial commission, gives rise to variations of an extreme diversity perfectly grasped by the actors.

The owners of land and of power sense the major movements of economic life and are in a position to make their decisions according to these perceptions. The second half of the 12th century in Tuscany is a good illustration of this (Dameron 1986; Conti 1965; Feller 2008b). As urban markets are developing and the supply of Florence is becoming an economic as well as political stake, the ecclesiastical lords, in this instance the abbot of Passignano and the bishop of Florence, convert their peasant tenure collection systems. Up to the 1190s, they used a complex system including money, a minimal proportion of the harvest, customary gifts, duties, bread, wine and poultry. The quantities required tended, during the 12th century, to become symbolical. Still, between the beginning of the 1190s and the end of the 1120s, the renewal of the agrarian contracts causes major turmoil. The abbey of Passignano as well as the bishop of Florence now require their tenant farmers, at the execution of contracts, to pay a high tenure entrance fee in money as well as a fixed quantity of cereals annually. The royalties in kind and the duties have admittedly been abolished, but these new requirements set the lords into a new economic system, dominated by commercial elements. The aim is to be present on the food market of Florence and to be able to influence the quality of harvests. Holding fixed quantities of cereals each year enables them to influence prices, to anticipate increases or decreases, and to place secure bets, regardless of whether the harvest is plentiful or scarce. The system provides insurance against production risks, mainly in the form of passing them entirely onto the producers who must cope with the variations in the quantities produced. The peasants were not fooled and endeavoured, as far as possible, to resist that new system which took them away from the

market by setting aside its profits for their lord. The issue of market access is the stumbling block here. On the other hand, the profits that derived from the rate variations are henceforth the monopoly of the lord. Moreover, the peasants are no longer able to direct their production and choose the commodities they are going to produce, which deprives them of the opportunity of taking part in the economic game by anticipating needs or taking into account the mechanisms of demand. This tendency to substitute fixed royalties in kind for proportional royalties, like terraticum, seems to be frequent in Italy at the end of the 12th century. It can be observed in the Padouan as in the Florentine contado and for the same reasons (Rippe 2003: 466-472): the aim is to derive the highest profit from the price increases and the growing use of currency in daily life transactions. The conversions of royalties thus show the capacity of the land-owners and power-holders to integrate economic calculation in their general policy of social domination.

Conclusion

The categories developed by economic anthropology and notably those opposing mercantile exchanges and nonmercantile exchanges are illuminating. They enable us to understand what is at stake in the wording of the values and in the different exchange procedures attested to in the medieval documentation. By introducing distinctions between the types of relations established by exchanges, files which are normally difficult or even impossible to interpret become more meaningful, as in the case of the texts surrounding the pontificate of Meinwerk of Paderborn. Postulating that the exchanges establish relations between things and that this relation is also a relation between people and a relation between people and things, strengthens the consideration of prices and requires a renewed interrogation of their meaning. Medieval economic actors have left us documentation which is difficult to understand and which frequently masks the reality of the enterprises established between people through things they circulate. The examination of the value of things, as expressed or hidden, enables us to come as close as possible to the way interpersonal relations, whether friendship, domination or subjugation, are intertwined with strictly economic relations by allocating things and men relations which throw greater light on reality.

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