

Chapter 1

**Equality and Equalization in the Economic Sphere, Part I:
The Scholastic Discourse on Usury to 1300**

“Usury is where anything more is required in return than was given. For example, if you lend 10 solidi and you seek anything more in return (*et amplius quesieris*), or if you lend one measure of wheat and you demand more in return.” Gratian, *Decretum* II. 14. 3. c. 4 (ca. 1145).

“It is not possible to demand anything more in return (than the sum lent) without violating both equity and equality (*absque aperta lesura equitatis et equalitatis*).” Peter of John Olivi, *Tractatus de emptionibus et venditionibus, de usuris, de restitutionibus* (ca. 1295).

“The reason why [money of a certain kind] can be bought or exchanged for a price [more than itself] is because . . . money which in the firm intent of its owner is directed toward the production of probable profit (*ad aliquod probabile lucrum*) possesses not only the qualities of money in its simple sense but beyond this a kind of seminal cause of profit within itself, which we commonly call “capital” (*communiter capitale vocamus*). And therefore it possesses not only its simple numerical value as money/measure but it possesses in addition a superadded value (*valor superadiunctus*).” Peter of John Olivi, *Tractatus de emptionibus et venditionibus, de usuris, de restitutionibus* (ca. 1295).

Throughout its history, scholastic economic thinking centered on the proposition that equality (*aequalitas*) is the proper and required end of all exchange. In line with this proposition, both in the scholastic discourse on usury (the subject of this chapter) and in the discourse on price and value (the subject of the next), writers universally identified the process of economic exchange as a process of equalization,

which is to say, a process of achieving a just *balance* between exchangers. This position is stated and restated from the time of Gratian's early analysis and discussion of usury in the *Decretum* (c. 1145), to Thomas Aquinas' questions on usury and just price in the *De malo* and the *Summa theologiae* (c. 1268-72), to Peter of John Olivi's pathbreaking questions on usury and price in the 1290's, to Jean Buridan's discussion of price and value in the 1340's and 50's – to name but a few of the major writers in this tradition.

Between the mid-twelfth and the mid-fourteenth century, the ideal of exchange equality remained constant, as did the words that scholastics used to designate it: *aequalitas*, *aequitas*, *aequivalentia*, *medium*, *medietas*, *mediocritas*, *temperantia*, and *justitia*, among others. The word most frequently used, *aequalitas*, was routinely identified with the exalted ideal of justice (*iustitia*), symbolized by the balancing scale. This further solidified *aequalitas* as an unchallengeable requirement in exchange. At the same time, it contributed to the associative link between the stated goal of *aequalitas* and the idea and image of balance – an association that had many contributing sources. Just as balance has a passive meaning (i.e., the equalized end or goal of a process) and an active meaning (i.e., the process itself of attaining that end), so over the whole of the medieval period the concept of *aequalitas* applied to both the passive goal of equality and the active process of equalization.

While the ideal of exchange *aequalitas* held firm over these two centuries of rapid commercialization and urbanization, and while the words designating this ideal held fairly firm as well, the spoken and unspoken meanings attached to this ideal changed profoundly. Gratian's assumptions about what constituted equality and equalization differed greatly from Thomas', Thomas' from Olivi's, Olivi's from Buridan's, even as each continued to use the same words and terms in reference to it. For this reason, if one is to grasp what scholastic writers meant, or understood, or assumed by the words they used, it is necessary to go past the words themselves in

search of the evolving apprehension or unworded *sense* that lay beneath them -- a sense of what constituted the desired state of *aequalitas* (in their terms) or balance (in ours), a sense of how this state could be achieved and maintained in the economic sphere, whether in agreements between individuals or as a product of transactions taking place across communities of exchangers.

Since the scholastic logic of exchange was so carefully constructed around the requirement for *aequalitas*, as assumptions and understandings concerning its possible forms changed, so too did judgments concerning which contracts could be defined as licit (i.e., working in the direction of equalization) and which illicit. Evidence for this changing judgment is particularly notable in the writings of clerics, both canon lawyers and theologians, with cardinals and popes among their ranks. The responsibilities attached to their positions required them to decide whether and in what ways new social and contractual forms could (or could not) be brought within the bounds of rationality and legality, i.e., could or could not be imagined as congruent with the requirement of *aequalitas*.

The persistence of the usury prohibition in scholastic economic thought over centuries is often taken as a sign that medieval churchmen were ignorant, even willfully ignorant, of the details of economic life in their society. The truth is more interesting. As we will see below, the early solidification of the Church's condemnation of usury, and the ever-increasing sense of danger and sin that attached to usurious acts, had the effect of forcing scholastic moralists, legal scholars, and theologians to become expert in the ways of the marketplace. Only this way could they hope to recognize usurious transactions and root them out. The stakes were believed to be very high: the fate of souls hung in the balance. Those clerics who undertook this task were gradually brought to recognize (and often to accept) that economic life functions according to its own rules and principles -- principles that demanded attention and comprehension even if they were often distinct from, if not at odds with, often-stated principles governing the Christian life.

They came to see that economic truths are provisional and approximative rather than absolute; that economic value is shifting and relativized rather than ordered to any recognizable hierarchy; that economic judgment functions around risks and probabilities rather than certainties.

Despite their recognition of these dichotomies, theologians and canon lawyers remained confident that they could carry their exalted ideal of *aequalitas* into the marketplace as the essential test of licit exchange. As we will see, however, the *aequalitas* that emerged from its immersion in the marketplace in the second half of the thirteenth century was far, far different from the one that had entered it a century and a half earlier. The goal of the judges remained consistent over this period: to align economic rules and behavior with the ideal of equality/justice. At the same time, however, the ever-multiplying speed, volume, and complexity of commercial and market exchange over these inflationary years had the effect of pressuring and continually reshaping the definitional bounds of *aequalitas* in the minds of these same judges, as they sought to reconcile, insofar as possible, their constantly restated ideal with the constant appearance of new contractual and transactional forms of exchange.

The goal of these first two chapters is to outline the changes that occurred in sense, assumption, and intellectual definition pertaining to the requirements for balance/*aequalitas* in economic exchange over the twelfth and thirteenth centuries, as legists and theologians responded to rapid developments in the economic sphere. Both chapters will show that by the end of the thirteenth century, these changes eventuated in the emergence of a new model of equality and equalization that differed profoundly from all models that had preceded it. I will argue that to this new model of equalization the word “equilibrium,” with its rich modern connotations of *systematic* self-ordering and self-equalizing, can for the first time be applied. The following two chapters trace the continual interchange between

intellection and economic actuality that underlay the process through which earlier models of equalization evolved into a model of systematic equilibrium.

Part I: Equality and Equalization in the Medieval Discourse on Usury¹

There were two major spheres of speculation within scholastic economic thought: questions relating to usury and contracts of loan (*mutuum*), and questions relating to the determination of price and value in exchange (*emptio/venditio*). The establishment of equality and equalization between exchangers remained an unquestioned and frequently asserted ideal in both, and there were many places where the assumptions and requirements worked out in one sphere corresponded with those in the other. There were also, however, differences sufficiently great to warrant treating each of the two spheres separately.

Historians of medieval economic thought have previously noted the extent to which usury theory was constructed around the requirement for equality in the loan contract or *mutuum*. They have recognized that the presence of *aequalitas* or a willed *adaequatio* signified the required presence of *iustitia* in the exchange, while inequality signified injustice and hence the sin of usury.² But even those modern scholars who have been most sensitive to the centrality of equality in usury theory have generally

¹ I introduced this subject in my *Economy and Nature in the Fourteenth Century: Money, Market Exchange, and the Emergence of Scientific Thought* (Cambridge, 1998), and I considered it again in "Changing Definitions of Money, Nature, and Equality, c. 1140-1270, Reflected in Thomas Aquinas' Questions on Usury," in *Credito e usura fra teologia, diritto, e amministrazione*, Diego Quaglioni, Giacomo Todeschini, and Gian Maria Varanini (eds.) (Rome, 2005), 25-55. In what follows, I make selective use of my earlier findings, supplementing them to suit the changed focus of my discussion here.

² Gabriel Le Bras, "Usure," in *Dictionnaire de théologie catholique*, vol. xv (Paris, 1950), col. 2333-37 at 2333. See also the "Introduction" to A. M. Hamelin (ed.), *Un traité de morale économique au XIV^e siècle: Le Tractatus de usuris de maître Alexandre D'Alexandrie* (Louvain, 1962), 79: "Le premier élément accepté et indiscutable est celui de l'égalité."

failed to recognize it as a concept in evolution, or even as a concept capable of evolution. When it is mentioned, equality is represented as an essentialized ideal, a conception without a history, the same in the twelfth century as it was in the fourteenth. In contrast, I have found that conceptions of both equality and equalization have a history, and that changes in the definitions they carried and conveyed had a profound impact on the structure and content of writings on usury from the twelfth century onward.

***Aequalitas* as Defined in Gratian's Question on Usury
in the *Decretum***

I begin my study of usury with the question Gratian devoted to the subject in his *Decretum* (c. 1145), the first time in the history of canon law that a question had been dedicated exclusively to this subject. While I use the definitions Gratian offers as a starting point for the history of balance/*aequalitas*, I also recognize that taking his treatment of usury as characteristic of mid-twelfth century attitudes presents certain problems. The opinions he cites in the process of establishing his own position are chosen from the writings of the Church Fathers, dating mostly from the fourth to the sixth centuries, with the most recent canons cited dating to the early ninth century. Moreover, early glosses on the *Decretum*, particularly those from the first decades of the thirteenth century, indicate a level of economic knowledge and sophistication considerably in advance of that found in Gratian's text. Nevertheless, Gratian leaves no doubt that the authoritative opinions he selected possessed *for him* an intellectual coherence sufficient to provide both an adequate definition of usury and a defensible position opposing it.

His first citation is to St. Augustine, who defines the usurer simply as one who in a loan contract (*mutuum*) expects to receive back more than the precise

amount he lent.³ The implication is that the slightest difference in quantity between sum lent and sum returned – even the lender’s *expectation* of the slightest difference – creates an inequality which constitutes the essential injustice of usury. In this opinion, Augustine extends the scope of usury to cover the loan of all manner of fungible goods: wheat, wine, and oil in addition to money, under the same strict requirements for a perfect numerical equality between amount lent and amount returned.⁴ Gratian’s second citation is to St. Jerome, through whom he introduces the concept of “superabundance” (*superhabundantia*) to express the idea that any excess whatsoever beyond the arithmetically equal in the loan contract is to be condemned as usurious.⁵ Where in the Christian spiritual realm “superhabundantia” is a benefit promised to believers, Jerome insists that its production in the economic sphere is an unnatural deformation. Over succeeding centuries this word appears frequently in discussions of usury to signify the production of an unnatural excess that violates the requirement for arithmetical equality in the loan contract and in other forms of economic exchange. In the third opinion cited by Gratian, St. Ambrose supplied a simple rule that was repeated in

³ St. Augustine cited in Gratian, *Decretum*, II. 14. 3. c. 1, A. Friedberg (ed.), *Corpus iuris canonici* (Graz, 1959), vol. 1, col. 735: “id est si tu mutuum dederis pecuniam tuam, a quo plus quam dedisti expectes”

⁴ *Decretum*, II. 14. 3. c. 1 (continuing): “non pecuniam solam, sed aliquid plus quam dedisti, sive illud triticum sit, sive vinum, sive oleum, sive quodlibet aliud, si plus quam dedisti expectes accipere, fenerator est, et in hoc improbandus, non laudandus.” Although Augustine does not use the technical term “fungible” in this citation, his debt to Roman law is clear. In Roman law, fungible goods have two qualities that set them apart from other goods: 1) they can be freely replaced by another of like kind and identical quantity in the satisfaction of an obligation, and 2) such substitution is necessary because the fungible (whether wheat, wine, oil, or in this case money) is consumed in its use, so the original cannot be returned.

⁵ *Decretum*, II. 14. 3. c. 2: “Quod prouidens diuina scriptura omnis rei superhabundantiam aufert, ut plus non recipias quam dedisti. Item: §. 1. Alii pro pecunia fenerata solent munuscula diuersi generis accipere, et non intelligunt scripturam usuram appellare et superhabundantiam quicquid illud est, si ab eo, quod dederint, plus acceperint.”

writings on usury countless times thereafter: "usury is anything whatsoever that exceeds the sum lent (*quodcumque sorti accidit usura est*)."⁶

In all, there is a striking simplicity and uniformity to the model of equality assumed to be proper to the *mutuum* in Gratian's citations. The model assumes an arithmetical equation of 1:1, with each side of the equation numerable, perfectly knowable, and perfectly fixed once known. Similarly striking in its simplicity is the model of equalization governing how this equality is to be achieved. It is a model based on the literal and original meaning of the word "equilibrium," the balancing of perfectly equal weights.⁷ In this, it precisely mirrors the workings of the mechanical scale, which, not coincidentally, was the standard iconographic representation of *iustitia* throughout the medieval period. Contractual equality and contractual justice in each of the canons cited by Gratian is represented by the perfect balancing of two numerically equal values at a single knowable and achievable point. The slightest arithmetical inequality represents an imbalance (*superhabundantia*) which is at the same time a violation of justice, a violation of the natural order, and a sin against divine and divinely mandated order.

Here as elsewhere, the model of equality and equalization that Gratian's text assumes tells us a great deal about how he views the details of economic life. In each of the canons cited, money is identified as a numerable physical coin of specified and unchanging weight and value. This identification is underscored through the linking of the coin to fixed and quantifiable measures of wheat, wine, and oil. Since the measures of all these commodities were, in the universe of Gratian's canons, fixed and knowable, it would be possible to recognize

⁶ *Decretum*, II. 14. 3. c. 3. This represents, indeed, Gratian's final *sententia* or judgment at the conclusion of his question on usury, II. 14. 3. c. 4: "Ecce euidenter ostenditur, quod quicquid ultra sortem exigitur usura est."

⁷ In the Galenic medical tradition, the form of balance represented by the mechanical scale measuring (and equating) weights was designated by the term, "aequalitas ad pondus."

immediately the slightest addition to the principle (*ultra sortem*) in the return of the loan, and to condemn that production of inequality as the unjust excess of usury. Ten *solidi* lent requires precisely ten in return, with the absence of any sense that the value of these coins might be subject to change over time or place or circumstance.⁸ In the texts cited by Gratian, the usurious contract takes place in a static social space composed of discrete entities and actions that remain separate and can be considered in isolation. There is no sense in any of the canons that the loan contract is embedded in personal, social, spatial, or temporal contexts that could affect its outcome or definition in any way. There is no consideration of the circumstance or position or status or relation of the participants in the exchange that might justify the lender asking or even expecting one penny more in return than the sum he has lent. And not only the participants to the exchange are imagined as innocent of context and relation; in each of the cited canons, economic value itself, along with the numerable coin, is assumed to be similarly isolated: perfectly measurable, knowable, absolute, and unchanging. We will see that all of these “economic” assumptions change considerably in the century following Gratian’s *Decretum* (i.e., 1150- 1250) and then change dramatically again in the century between 1250 and 1350. Changing right alongside them are assumptions concerning what actually constitutes equality and proper equalization in the loan contract.

Pressures on the Redefinition of Economic *Aequalitas* after Gratian

By the end of the twelfth century, the authority of the anti-usury prohibition was fully established through Gratian’s text and myriad legal and theological texts that followed from it. At the same time, rapid monetization, commercialization, and

⁸ *Decretum*. II. 14. 3. c. 4: “Usura est, ubi amplius requiritur quam quod datur. Verbi gratia, si solidos decem dederis, et amplius quesieris, uel dederis frumenti modium unum, et super aliquid exegeris.”

market development over this half century had opened the door to ever more lending opportunities and ever greater need for loans. As a result, merchants and others involved in credit operations were caught in a bind. One way they responded was to invent a variety of accounting techniques and contractual forms surrounding the *mutuum*, some of which, no doubt, had the purpose of disguising usurious (i.e. arithmetically unequal) loans and credit operations. This strategy of evasion was well known to the Roman and canon lawyers of the time.⁹ The decretal *Consuluit* issued by Pope Urban III (1185-87) recognized the problem and responded to it by adding Christ's command from *Luke 6:35*, "Lend, hoping for nothing again," to the *Old Testament* texts previously cited in the condemnation of usury. From this point on, moralists equated the mere hope of gaining an unequal return with mortal sin. Given the difficulties that judges had in penetrating the thicket of new contractual forms, their strategy was to internalize the test of usury so that the economic actors themselves would share responsibility for its determination.¹⁰

The expanded emphasis on intention in credit transactions that followed allowed canon lawyers and theologians to continue to assert the absolute ideal of arithmetical equality, even as the increasing complexity of commercial credit transactions (and changing assumptions concerning the fixity of economic values) made such an equality increasingly difficult either to define or enforce. Moreover, as the primary question for Christians engaged in all forms of credit became "did I or did I not intend inequality in the transaction," and as the responsibility for maintaining equality was personalized and interiorized, many were required to

⁹ T. P. McLaughlin, "The Teaching of the Canonists on Usury (XII, XIII and XIV Centuries)," *Mediaeval Studies* 1 (1939), 81-147, esp. 97, 112-25.

¹⁰ Instructions to confessors on how to sensitize their charges to the sin of usury appear for the first time in the *Summae confessorum* of Thomas of Chobham (1215-16) and Raymond of Penafort (1225-27). On the project of interiorization, see Giacomo Todeschini, "La riflessione etica sulle attività economiche," in *Economie urbane ed etica economica nell'Italia medievale*, Roberto Greci (ed.) (Rome, 2005), 151-228.

become knowledgeable in the ways of economic practice as never before. This group included individuals who engaged in credit transactions, their confessors, the clergy responsible for ordering the Christian life, and the legal scholars who were increasingly called on to provide judgments on these questions. One unintended consequence flowing from the logic of the usury prohibition, is that those who would judge and enforce it, even those clerics most suspicious of the corrupting effects of commerce and the pursuit of monetary gain, had no choice but to pay ever closer attention to the details of economic life.

Aequalitas and the Law

The century following the publication of Gratian's *Decretum* was a formative period for the study and teaching of both canon (Church) law and civil (Roman) law. Both laws developed side by side in the setting of the University of Bologna, which was at the same time the first university in Europe and its first law school. Where the science of canon law developed around the text of Gratian, the science of civil law developed in this same period around the texts constituting the *Corpus iuris civilis*. These texts, *Digest*, *Codex*, *Institutes* (and later *Novellae*), first compiled and published in the time of the Emperor Justinian (c. 534 CE), and first recovered for study at Bologna in the first half of the twelfth century, contained the distilled legal wisdom and judgments of six centuries of Roman jurisprudence.

From its earliest days, the medieval profession of law placed an extraordinary value on the ideal of *aequitas*. The historian Paolo Grossi has called the concern with *aequitas* "the golden key" to medieval legal thought, noting that the ideal is spoken of "obsessively" by the greatest legists of the medieval period.¹¹ Already in the twelfth century, the followers of the jurist Martinus associated *aequitas* directly with

¹¹ Paolo Grossi, *L'Ordine giuridico medievale* (Rome, 1995), 211: "E di *aequitas* si parlerà ossessivamente in tutte le grandi decretali dell'età classica . . ."

the divine. In their words, “*aequitas* is nothing other than God” (*aequitas est nihil aliud quam Deus*).¹² It was in good part because lawyers had such confidence in this ideal that they could project it so forcefully into their analysis of forms of economic life. For this reason, too, both Roman and canon lawyers could accept it, without question, as the ultimate test of liceity in economic contracts.¹³ Since in Roman law and canon law, the scope of usury was explicitly limited to loans involving “those things which are dealt in by weight, number, or measure,” including, of course, weighable, numerable, and measurable coin, the lawyer’s *aequitas* mapped nearly perfectly onto *aequalitas*, with its physical and mathematical overtones.¹⁴

For all the implications of numerability and knowability that the word “equality” still carries today when used in its mathematical sense, it also carries significant abstract associations, particularly when applied, as it most commonly is, in the political and social sphere. It is important to note, therefore, that the *aequalitas* championed by medieval canon lawyers and theologians, and applied by them to economic contracts, had nothing to do with the abstract ideals of political or social equality enunciated in the seventeenth and eighteenth centuries and still current today. The medieval ideal of *aequalitas* could be measured and applied with some sense of certainty.¹⁵ As such, it was thought to have a real presence in both nature and the human condition, deriving from the central place it was thought to occupy

¹²André Gouron, “Some Aspects of the Medieval Teaching of Roman Law,” in *Learning Institutionalized. Teaching in the Medieval University*, John Van Engen (ed.) (Notre Dame, 2000), 161-76, at 164.

¹³ Grossi, *L’Ordine giuridico*, 181-82: “[L’*Aequitas*] sarà il campo della rappresentanza, del contratto a favore di terzi, dei titoli al portatore, della lettera di cambio, cioè il campo tutto nuovo dei nuovi traffici commerciali”

¹⁴ *Digest*, 12.1.2.1., Theodore Mommsen (ed.), vol. 1 in *Corpus iuris civilis*, 3 vols. (Berlin, 1954). Also, T. P. McLaughlin, “Teaching of the Canonists,” 99-101. McLaughlin here cites Huguccio, *Summa*, on C.14.q.3: “Mutuum enim consistit in his rebus quae pondere, numero vel mensura constant veluti vino, oleo, frumento, pecunia numerata, aere, argento, auro etc.” The limitation of the usury prohibition to the quantifiable and numerable is clearly apparent in the canons cited by Gratian above.

¹⁵ Grossi, *L’Ordine giuridico*, 180.

in the divine order of creation.¹⁶ In the often repeated phrase taken from the biblical *Book of Wisdom*, God has “ordered all things in measure, and number, and weight.”¹⁷ *Aequalitas*, as the quantifiable aspect of *aequitas*, had a concrete reality that could be judged and applied by legists toward the production and restoration of just balance in the world.

At the same time, as the thirteenth century progressed, it was becoming ever clearer to legists that the ideal numerical equality demanded by Gratian’s canons was difficult, if not impossible, to impose upon credit contracts when they were embedded in the real world of economic exchange. Everyone after Gratian who wrote on the problem of usury from the practical and legal side recognized that establishing an equation between benefit and loss in the loan contract was extraordinarily difficult, and more difficult still were the many questions connected to the matter of restoring what were determined to be illicit gains. Solutions offered by lawyers to questions touching on usury and restitution from the thirteenth century onward became increasingly latitudinarian in order to do justice to the actual complexities attached to exchange and to provide equitable solutions to real problems. For the most part, the position espoused by theologians remained that a loan should be made out of charity and without any hope of return beyond the sum lent. But within the disciplines of Roman and canon law, which required the observation and analysis of actual cases and existing conditions, the realization grew that if the lender was to be denied the expectation of reward, he must at the same time be protected from damages associated with the act of lending.

To ensure this protection, canon lawyers began to apply the Roman law concept of *interesse* to the loan contract. In Roman law, *interesse* was a monetary penalty applied to damages resulting from the breaking of a contract. From the last

¹⁶ Grossi, *L’Ordine giuridico*, 213.

¹⁷ *Wisdom*, 11:21: “sed omnia mensura et numero et pondere disposuisti.”

decades of the twelfth to the early decades of the thirteenth century, lawyers began to see the logic of extending *interesse* to the loan contract as an indemnity to the lender for the failure of the borrower to meet his contractual obligations.¹⁸ In the most commonly cited case, the lender was permitted to charge a penalty if the borrower failed to repay his loan within the agreed time period.¹⁹ Since justifying *interesse* (as a monetary penalty incurred by the borrower) from the beginning of a loan would mean the virtual dismantling of usury theory, medieval legists who acknowledged legitimate *interesse* in specific cases, were careful to define it as an "extrinsic title," outside the form of the contract itself, awarded only as the result of loss resulting from contractual failure (*damnum emergens*). In this way, they argued, a payment made to the lender *ultra sortem*, could still be just and legitimate, i.e., could still be integrated into the requirement for *aequalitas*, if it was made not as a reward for the act of lending, but solely as compensation for contractual damages incurred by the lender (*non lucrum sed vitatio damni*).²⁰

Introducing Proportion into the Equation

¹⁸ John Baldwin, *Masters, Princes, and Merchants: The Social Views of Peter the Chanter and His Circle*, 2 vols. (Princeton, 1970), 1: 282; McLaughlin, "Teaching of the Canonists," 140.

¹⁹ McLaughlin, "Teaching of the Canonists," 140-43; See also, John Noonan, *The Scholastic Analysis of Usury* (Cambridge, Mass., 1957), 109-12. The analysis of usury has evolved considerably in the three quarters of a century since the publication of McLaughlin's important study ("Teaching of the Canonists") and the half century since the publication of Noonan's book. Both have been criticized in recent decades, most often for reading too great a unity and homogeneity into the tradition of writings against usury, both in law and in theology. Moreover, neither was aware of the crucial writings on usury by Peter Olivi (see below in this chapter) and the tradition of economic thought based on these writings. Nevertheless, both works have earned their place in the historiography of usury, and for the most part both can still be relied upon for details relating to its textual history before Olivi. Where their judgments have not been superseded, I continue to cite them.

²⁰ Noonan, *Usury*, 106; McLaughlin, "Teaching of the Canonists," 125-47, esp. 141-42; Jean Ibanès, *La doctrine de L'Église et les réalités économiques au XIIIe siècle* (Paris, 1967), 25-27.

Whether intrinsic or extrinsic, the recognition that *interesse* could apply to credit contracts meant that the violation of a strict arithmetical equality between sum lent and sum returned no longer infallibly constituted usury. In Roman law through the time of Justinian, where moderate usury was accepted and not condemned, the difference in the relative position of lender and borrower, and the difference in what each stood to gain or lose from the loan contract, was allowed to express itself as a legal interest rate—a fixed proportional difference between the amount lent and the greater amount received back in return.²¹ Even though medieval canon lawyers and other observers after Gratian became increasingly sensitive to the differing positions of lender and borrower in the *mutuum*, and even though they were acutely sensitive to the requirement of equality in exchange, they were unable to follow the example of Roman law by simply integrating proportionality into the loan contract.

There was much more at stake here than the overturning of a purely economic position. Abandoning usury theory would, by the thirteenth century, entail overturning a string of papal decisions and authoritative canons, beginning with those cited by Gratian. And further, it would mean overthrowing the theological edifice of sin, restitution, and penance that had been built upon these canons since the twelfth century. At its furthest, it would mean overturning divine laws against usury, with their source in the Hebrew and Christian Bible. As the social effects of monetization and commercialization became ever more pervasive, however, those lawyers who confronted questions surrounding credit were pushed to recognize the obvious: that borrowers benefited from the money made available

²¹ On the differences between the Roman law of the *Corpus iuris civilis* (issued 534 CE, during the reign of Justinian), and canon or church law on the subject of usury, as well as differences between medieval Romanists and canonists on this subject, see McLaughlin, “Teaching of the Canonists,” 83-95.

to them, while lenders often suffered economic damages from losing the use of their money.

Over the course of the thirteenth century, canon lawyers devised a solution to this problem: they continued to insist that a loan should be made without hope of receiving back more than the sum lent, but at the same time they recognized specific cases in which the lender could licitly demand indemnification for economic loss, even in cases where the borrower had fulfilled the contract to the letter. One of the most liberal interpretations of this position was offered by the great canon lawyer, Hostiensis (Henry of Susa / Henricus de Segusia), in his magisterial *Summa super titulis decretales*, commonly known as the *Summa aurea*, which he completed in 1253.²² Every aspect of Hostiensis' discussion indicates that he was paying very close attention to the actualities of economic exchange in his society.²³ In allowing the lender to demand an increase beyond the sum lent in compensation for actual damages suffered (*damnum emergens*), Cardinal Hostiensis (he was raised to the cardinalate in 1262 and served in that office until his death in 1271) remained on well-trod legal ground.²⁴ Much more singular and notable was his acceptance of an

²² For a study of his *Summa aurea* and an appreciation of his place in medieval canon law, see Clarence Gallagher, S. J., *Canon Law and the Christian Community: The Role of Law in the Church according to the Summa aurea of Cardinal Hostiensis* (Rome, 1978).

²³ The verse which begins Hostiensis' discussion of usury in the *Summa Aurea* cites twelve legitimate exceptions to the rule that "nothing may be received beyond the sum lent." For an analysis of this verse, see McLaughlin, "Teaching of the Canonists," 125-45. For a penetrating discussion of the scope and implications of Hostiensis' exceptions, see Giacomo Todeschini, "Eccezioni e usura nel Duecento: Osservazioni sulla cultura economica medievale come realtà non dottrinarie," *Quaderni storici* 131 (2009), 443-60. Todeschini argues that these exceptions were intended to apply only to certain segments of the population, namely professional merchants of good reputation and clerical agents representing the economic interests of ecclesiastical institutions. The full weight of the usury prohibition, therefore, fell, and was intended to fall, primarily on the marginalized in society.

²⁴ McLaughlin, "Teaching of the Canonists," 145; Baldwin, *Masters, Princes and Merchants*, 279-84; Ibanès, *La doctrine*, 25-27.

increase beyond the principle (*ultra sortem*) to indemnify a lender for the gain he merely *might* have made with his money had he not lent it. He wrote:

if some merchant, who is accustomed to pursue trade and the commerce of the fairs and there profit much, has, out of charity to me, who needs it badly, lent money with which he would have done business, I remain obliged from this to his *interesse*, provided that nothing is done in fraud of usury . . . and provided that said merchant will not have been accustomed to give his money in such a way to usury.²⁵

Such indemnification *ultra sortem* came to be known under the title *lucrum cessans* (i.e., “lost profit”).²⁶ Hostiensis insisted on classifying *lucrum cessans* as an external title rather than as a legitimization of usury. This was true even though in cases where the lender was a merchant “accustomed to pursue trade and the commerce of the fairs and there profit much,” *interesse* could conceivably be calculated from the beginning of the loan as part of the loan contract itself. Hostiensis did not see a problem here. Despite his acceptance of *lucrum cessans* in the cases above, which not only justified returns *ultra sortem* but actually required them to maintain equality between lender and borrower, he continued to insist that the very idea of “legitimate” or “moderate” usury involved a contradiction in terms, since usury was, in itself, evil and unnatural.²⁷

²⁵ Hostiensis, *Commentaria super quinque libros decretalium* (Venice, 1581), Book V, *De usuris*, 16, cited and translated by Noonan, *Usury*, 118.

²⁶ McLaughlin, “Teaching of the Canonists,” 145; Noonan, *Usury*, 118; Barry Gordon, *Economic Analysis before Adam Smith* (New York: Barnes and Noble, 1975), 149-53.

²⁷ Hostiensis, *Summa Aurea* (Venice 1574; reprint Turin, 1963), Book V, “De usuris,” col. 1630: “Quia omnis usura immoderata est, et ideo hodie omnis usurarius infamis est”

In Hostiensis' thought we see the tension that arose from the desire (or pressure) to maintain old ideals in a new and charged economic environment. This tension was reflected in conflicting models of equalization. The old model of a simple arithmetical equality, on the pattern of the mechanical scale balancing two perfectly equal weights at a single point, remained in force, attractive for its simplicity and its clarity, even while it was being severely pressured by the growing recognition that credit transactions occur in weighted social contexts rather than in a static abstract space. The growing recognition that the participants in credit exchanges were, in economic terms, often *unequal*, with the borrower gaining and the merchant-lender losing, lay behind the rising acceptance of *interesse* as a legitimate monetary indemnification in loan contracts. The growing recognition over the thirteenth century that the relation of inequality between borrower and lender was in some sense a *proportional relation*, one whose numerical value was open to representation and equalization through the numbered scale of money, lay behind the far more adventurous intellectual arguments in support of *lucrum cessans* to indemnify *potential* or *probable* lost profit. The existence of unchallengeable scriptural and legal canons led medieval lawyers and moralists to continue to excoriate usury as unnatural and sinful *in se* and to insist on older rigorist ideals of strict arithmetical equality (*quodcumque sorti accedit*), while at the same time admitting "external titles" to added values (*damnum emergens, lucrum cessans*) and thus moving in practice toward a modified conception of proportional equalization – toward a just balance defined in proportional terms, rather than fixed at 1:1.²⁸

²⁸ McLaughlin, "Teaching of the Canonists," 125, n. 357. On developments in usury theory taking place beneath the continued restatement of traditional and often abstract ideals, see Ovidio Capitani, "Sulla questione dell'usura nel Medio Evo," in O. Capitani (ed.), *L'etica economica* (Bologna, 1974), 23-46.

Adding Doubt and Risk to the Exchange Equation

The examination of particular economic contracts that came under the watchful eyes of the canonists over the course of the thirteenth century presents yet another view of the transformation of *aequalitas* in economic thinking. Two of the most complex and problematic of these contracts were time sales (*venditio ad tempus*) connected primarily to commercial goods, and annuities (*census, redditus*) connected primarily to real property. In modern terms, both contractual forms fall squarely under the heading of “aleatory contracts,” a name derived from the Latin for a game of dice (*alea*) and hence a player of dice or gambler (*aleator*).²⁹ Both forms rendered judgments concerning economic justice and equality immensely difficult due to the varying amounts and kinds of doubt and risk that were built into them. Both forms were inescapably situated in the shadow realm of the possible and the probable; their outcomes rested on unknowable events that lay in the future. Knowledge concerning their outcomes thus lacked all certainty and fixity. For this reason both contractual forms presented the same question: how, some centuries before the invention of a mathematics of probability (before it was even imagined that such a mathematics was possible) to establish an equality between contracting parties, given outcomes that are merely possible or probable and, moreover, possible or probable in differing degrees and as a result of differing factors?³⁰ Since justice and

²⁹ Under this category fall all forms of contracts involving profit and loss resulting from chance or contingent events and outcomes, including, importantly, wagers and gaming “contracts” of all kinds.

³⁰ The last half century has seen a series of important studies on the theological, philosophical, and mathematical problems posed by aleatory contracts. One point that intellectual historians have clearly established is that the class of problems posed by the presence of risk and doubt in economic contracts proved to be a great impetus to the development of a mathematics of probability in the early modern period. Notably, in early modern sources on aleatory contracts, historians have found the same focus on questions relating to the establishment of equality/equity as in medieval sources. The writings of Lorraine Daston are exemplary in this matter. See, in particular, her *Classical*

aequitas required the maintenance of *aequalitas* in all credit contracts, and since the parties to these contracts themselves had been made responsible for such conformance, with the fate of souls lying in the balance, the question was far from merely academic. But that does not mean that all could agree on how to contain the uncertainty of doubt and risk within the bounds of *aequalitas*. There was no set position on the question that satisfied lawyers, theologians, and confessors of any generation, much less from one generation to the next, as commercial exchange continued to multiply in degree and complexity over the thirteenth century.³¹ Meanwhile, merchants continued to invent new contractual forms of credit, in part because the dynamic of commercial expansion called them into being, and in part, no doubt, to disguise interest-bearing loans (*in fraudem usurarum*).³²

Probability in the Enlightenment (Princeton, 1988), esp. 15-48; idem, "The Domestication of Risk: Mathematical Probability and Insurance 1650-1830," in *Ideas in History: The Probabilistic Revolution*, vol. 1, Lorenz Krüger, Lorraine Daston, and Michael Heidelberger (eds.) (Cambridge, Mass., 1987), 237-60; idem, "Fitting Numbers to the World: The Case of Probability Theory," in *History and Philosophy of Modern Mathematics*, William Aspray and Philip Kitcher (eds.) (Minneapolis, 1988), 221-37. A similar sensitivity to the confluence of economic concerns, the search for equality, and the invention of a mathematics of probability appears in Edith Sylla, "Business Ethics, Commercial Mathematics, and the Origins of Mathematical Probability," in *Oeconomies in the Age of Newton*, Margaret Schabas and Neil de Marchi (eds.) (Durham and London, 2003), 309-37.

³¹ For studies that take the question of aleatory contracts and commercial risk back to the medieval period, see James Franklin, "The Ancient Legal Sources of Seventeenth-Century Probability," in *The Use of Antiquity: The Scientific Revolution and the Classical Tradition*, Stephen Gaukroger (ed.) (Dordrecht and Boston, 1991), 123-44; idem., *The Science of Conjecture: Evidence and Probability before Pascal* (Baltimore, 2001); Giovanni Ceccarelli, *Il gioco e il peccato: economia e rischio nel tardo medioevo* (Bologna, 2003); idem, "Risky Business: Theological and Canonical Thought on Insurance from the Thirteenth to the Seventeenth Century," *Journal of Medieval and Early Modern Studies* 31 (2001), 607-58; idem, "The Price for Risk-Taking: Marine Insurance and Probability Calculus in the Late Middle Ages," *Journ@l Electronique d'Histoire des Probabilités et de la Statistique* 3 (2007), 1-26; Sylvain Piron, "Le traitement de l'incertitude commerciale dans la scolastique médiévale," *JEHPS* 3 (2007), 1-31.

³² Historians have credited the invention of such contractual forms, whose purpose and effect was to divide and distribute the ever-present risk and dangers associated with

One such form, in common use by the last quarter of the twelfth century, was the “time sale” (*venditio ad tempus*). Here a buyer would receive goods from a seller (on credit as it were) in exchange for a future payment at a price higher than the goods were valued in the present. Was this a legitimate sale or a disguised loan? The difference between the current and higher future price could be interpreted as a return on a loan *ultra sortem*, beyond the principle lent, and thus beyond the bounds of equality. The archbishop of Genoa wrote to Pope Alexander III (1159-81), asking whether such a contract should be judged licit or usurious. Alexander responded with the decretal, *In civitate*, in which he held that insofar as the increase was due solely to the intervention of time, such contracts were clearly usurious.³³ While Alexander’s intent was to close a contractual loophole and to enforce a rigorist position on usury, he unwittingly opened the door to a large field of potential equivocation by adding an exception. If, he wrote, rather than certainty, there was a legitimate *doubt* as to whether the goods would be worth more or less in the future, then the future payment could be greater than the current price without there being disguised usury in the contract.³⁴

Some forty years later, in the decretal *Naviganti* (1237), Pope Gregory IX, a leading canonist in his own right, considered the legality of two more contracts. His first decision was in regard to a very common contract of the time, the “sea loan”

commerce, with fueling the commercial expansion of the thirteenth century. See, for example, Yves Renouard, “Le rôle des hommes d’affaires italiens dans la Méditerranée au Moyen Age,” in *Études d’histoire médiévale*, 2 vols. (Paris, 1968), 1 : 405-18. For examples of loans disguised by the sheer complexity of medieval business dealings, see Etienne Fournial, *Les villes et l’économie d’échange en Forez aux XIIIe et XIVe siècles* (Paris, 1967), 214-17.

³³ *Decretales Gregorii IX*, V.19.6, *In civitate*, in A. Friedberg (ed.), *Corpus Iuris Canonici* (Graz, 1959), vol. 2, col. 813.

³⁴ *Decretales Gregorii IX*, V.19.6, *In civitate*: “Licet autem contractus huiusmodi ex tali forma non possit censeri nomine usurarum, nihilominus tamen venditores peccatum incurrunt nisi dubium sit, merces illas plus minusve solutionis tempore valituras.” See also, Noonan, *Usury*, 90-91.

³⁴ *Decretales Gregorii IX*, V.19.19, *Naviganti*, col. 816.

(*foenus nauticum*), in which a sedentary party acting as a creditor lends a sum of money to a travelling merchant to trade with, while retaining all the risk involved in the future transaction. If, for example, the ship were to sink or the merchandise were to be ruined, the sedentary merchant would absorb the loss of the entire sum he had invested. In return for assuming all the risk of the venture (*periculum sortis*), the sedentary merchant contracts to receive a certain portion of the profit made from the trade, in addition to the original sum he lent. Here we have a case where the uncertainty of risk, born solely by the lender, would seem to expand the mathematical equality required in loan contracts, rendering licit the lender's acceptance of a sum *ultra sortem*. But Pope Gregory disagrees, or so the wording of *Naviganti* would have it, and he charges the sedentary merchant in such cases with usury. In doing so he deemed this form of contract illicit and usurious, despite its commonness and its having gained general acceptance up to this time.³⁵

In Gregory's response we seem to have a reaction against loosening the bounds of *aequalitas* in the name of risk alone. But in the very next sentence within *Naviganti*, Gregory returns to the general case of time sales, and he confirms Pope Alexander's earlier decision justifying a numerically unequal return where doubt exists. He writes: if there exists true doubt (*verisimiliter dubitatur*) concerning the future price of the goods, then the contract is licit, despite the manifest quantitative inequality between the two sums separated by future time.³⁶ Once again, with this judgment, the inescapable uncertainty built into contracts involving an unknowable

³⁵ *Decretales Gregorii IX*, V.19.19, *Naviganti*, col. 816: "Naviganti vel eunti ad nundinas certam mutuans pecuniae quantitatem pro eo quod suscit inde periculum recepturus aliquod ultra sortem, usurarius est censendus." The ruling was later interpreted as holding that the original lender cannot be guaranteed the return of his full capital solely for assuming the risk of his complete loss; he must also assume the risks associated with losses deriving from the commercial activity undertaken by the borrower.

³⁶ *Decretales Gregorii IX*, V.19.19, *Naviganti*. "Ratione hujus dubii etiam excusatur qui pannos, granum, vinum, oleum, vel alias merces vendit ut amplius quam tunc valeant in certo termino recipiat pro eisdem; si tamen ea tempore contractus non fuerat venditurus."

future is understood to confound any simple definition of just equality based on a purely equal numerical return. Moreover in support of his decision regarding contracts *venditio ad tempus*, Pope Gregory offered what appears to be a general rule: “By reason of such doubt, usury is excused” (*Ratione huius dubii etiam excusatur*). If there is not outright confusion and contradiction within the decretal *Naviganti*, there is certainly a wobbly understanding and application of the requirement of *aequalitas* – perhaps a wobble that simply befits the intractability of the problem of equalization when applied to credit contracts that extend to an unknowable future – as so many commercial contracts do.³⁷

Despite the unquestioned and unquestionable authority attached to papal decretals, Gregory’s judgment in *Naviganti* did not close the book on the question of risk and doubt – very far from it. Indeed, as it turned out, the mixed message that it contained served as a spur to economic analysis and speculation and, no doubt, to intellectual hair-splitting as well, for generations and centuries following.³⁸ One thing is clear: the evolving discussion within canon law and theology moved in the direction of expanding the definition and understanding of equality in credit contracts far beyond the one-to-one test of Gratian’s canons. By the mid-thirteenth century, the modeling of *aequalitas* no longer reflected the form of the mechanical scale, where two perfectly equal weights find a single point of balance, and where

³⁷ For a defense of the logic behind the distinction between risk (*periculum sortis*) and doubt (*ratione dubii/ratione incertitudinis*) in the decretal *Naviganti*, see Le Bras, “Usure,” cols. 2336-72.

³⁸ See for example, the solution arrived at by Thomas Aquinas, which if it does not explicitly contradict *Naviganti*, manages to find a way, by altering the definition of such contracts (i.e. by considering them as partnerships rather than as loans), to reward risk with a required percentage of the profits, in *Summa theologiae*, 2.2.78.2. Others took other tacks. More than two centuries later, Domingo Soto (1495-1560) was still working over the question, still working out a way to justify profit from risk as he moved in the direction of what we would today recognize as an insurance contract. On this subject, see Franklin, “Ancient Legal Sources of Seventeenth-Century Probability,” 129-30; Ceccarelli, “Risky Business,” 610-14.

the slightest imbalance is clearly known and immediately revealed. A generation after the promulgation of *Naviganti*, Hostiensis could write in the *Summa aurea*: “and thus, by reason of probable doubt, many things [contracts and contractual forms] are licit which otherwise would be deemed illicit.”³⁹

Stretching the Bounds of *Aequalitas* Yet Further: The Census Contract

A second set of cases through which doubt entered the economic equation concerned the *census* contract. In this agreement, one party, A, transfers ownership rights of a piece of land to B, and in return B contracts to return to A an annual payment, representing a fixed proportion of the land’s total value at the time of the agreement. This annual payment is specified to continue either for as long as A or his specified heirs live, i.e., a “return for life” (*redditus ad vitam*), or in perpetuity (*redditus perpetuus*), in which case the annual payment was set at a reduced proportion of the original value. If, for example, the value of the land that A transfers to B is 20 solidi, B contracts to return 2 solidi annually to A, or one tenth of the land’s original value.⁴⁰ The census contract was of particular importance to canon lawyers because it was widely and profitably used by ecclesiastical institutions in this period, and its continuance was considered by many in the Church to be essential to institutional economic health.⁴¹ Such reliance underscores the reality that the dynamic interplay between contracting parties in the

³⁹ Hostiensis, *Summa aurea*, col. 1623: “et sic ratione probabilis incertitudinis multa sunt licita quae alias non licerent.”

⁴⁰ A classic work on the early history of the census contract is Fabiano Veraja, *Le origini della controversia teologica sul contratto di censo nel XIII secolo* (Rome, 1960). See also John Munro, “The Medieval Origins of the Financial Revolution: Usury, Rentes, and Negotiability,” *The International History Review*, 25 (2003), 505-62; “Mclaughlin, “Teaching of the Canonists,” 120-22; Hamelin (ed.), *Tractatus de usuris*, 93-97.

⁴¹ Veraja, *Contratto di censo*, 7, 23-24.

marketplace, which was of such concern to canon lawyers, was not the exclusive field of lay economic actors, but that Church institutions of every kind and size were deeply involved in these transactions.⁴²

The question the lawyers asked of the census was a simple one: if land valued at a certain sum of money has been transferred by one party to another in exchange for smaller annual monetary payments (by the thirteenth century, most census contracts were stipulated in terms of a numbered price (*pecunia numerata*) due annually), and those annual payments eventually total more than the original monetary value advanced, is this not a usurious loan in its clearest definition: “where more is received in return than was given.”⁴³ If, for example, a contract *redditus ad vitam* stipulates that the annual payment will be 10% of the original value advanced, the return would be precisely equal only in the unlikely event that the recipient dies after precisely ten years have passed.⁴⁴ If the recipient lives for fifteen, twenty, or more years, then the total repayment could be double or more the original sum. And if, as became increasingly common, the agreement stipulated a perpetual annual return, then the possibility of an “equal” return, in any sense that Gratian would have understood the term, is completely and necessarily destroyed.⁴⁵ How is this not usurious?

Raymond of Penafort, the same legal scholar who collected and published Pope Gregory IX’s decretal *Naviganti* in the collection known as the *Liber Extra*

⁴² Giacomo Todeschini has repeatedly argued that we cannot understand the development of medieval economic definitions, distinctions, and doctrines without keeping this firmly in mind. See in particular, *Il prezzo della salvezza: lessici medievali del pensiero economico* (Rome, 1994), esp. 163-228; idem, *I mercanti e il tempio: la società cristiana e il circolo virtuoso della ricchezza fra Medioevo et Età Moderna* (Bologna, 2002).

⁴³ E.g., Gratian, *Decretum* II, 14, 3, c.1.

⁴⁴ A 10% annual payment is common in the contracts that Veraja examined, though he found evidence of returns ranging from 5%-12.5%.

⁴⁵ Tellingly, Veraja has found that the terms for a perpetual return were generally the same as those for a life return (*Contratto di censo*, 20-23), indicating that there was simply no expectation of (or concern for) numerical equality over the life of the contract.

(1234), was the first lawyer to offer an opinion on the liceity of the census contract. Not surprisingly given the tradition before him, Raymond established as his guiding principle that liceity is linked to a fixed and knowable numerical equality: the annual payment stipulated in contracts *redditus ad vitam* must be pegged to the age, health, and probable number of years remaining to the party receiving the annual payment. The total sum of the return must be approximated, insofar as possible, to the original value of the transferred land. If the original value was intentionally lower than the sum most likely to be returned, then the contract was *in fraudem usurarum*.⁴⁶ Raymond attempted here to fit the census contract, which was very favorable to the economic health of ecclesiastical institutions, to the old model of commutative equality, even though it had doubt and approximation built into it. It was not an easy or comfortable fit. At this point, however, he was still holding firm to the traditional requirement of a numerically quantifiable equality in the exchange.⁴⁷

The liceity of the census contract continued to be the subject of debate in the decades following Raymond's decision. In 1251 Pope Innocent IV (1243-54), a renowned legal scholar and former professor of law at Bologna, took up the question in his great work on the *Decretals*, written over decades of his life, as part of his commentary on the decretal *In civitate*.⁴⁸ His argument, the most elaborate by a canonist of the thirteenth century, contained a number of parts, each of great interest and importance to the history of equality. Pope Innocent was clearly not satisfied with the previous decisions concerning the liceity of the census contract, and he took

⁴⁶ Veraja, *Contratto di censo*, 29.

⁴⁷ For a continuation of this line of reasoning in the early fourteenth century, albeit with much added detail and mathematical rigor concerning the doubt and probability built into such contracts, see the comments of Alexander Lombard in Hamelin (ed.), *Tractatus de usuris*, 152-57.

⁴⁸ Innocent IV, *Super Libros Quinque Decretalium* (Frankfurt, 1570, reprint Minerva, 1968), V.19.5, *In civitate*.

a decidedly different tack. He argued that the census contract is not formally usurious because it is not properly a loan (*mutuum*) but is rather a contract of sale (*venditio*). Therefore, the canons from Gratian governing the determination of equality in the *mutuum* do not apply to it.⁴⁹ If, he wrote, the census contract is indeed a sale, one is no longer bound by the perfect equality required by usury theory. By viewing the *census* contract in strict formal terms as a sale, Innocent transferred the judging point of commutative equality from the eventual outcome over the life of the contract, to the moment at which the agreement was made. All that is required, he writes, is that the price agreed to *at the time of the sale agreement* by both parties to a census contract conforms more or less to the common price of other similar *census* contracts (*communi aestimatione non excedat*). The terms of payment agreed to in such contracts are to be determined by the estimation of the parties themselves that they have arrived at a just equivalence (at best approximate) between the promised annual return and the original “buying” price offered.⁵⁰ The shared estimation of equal benefit at the time of the sale at the common price, has now been deemed sufficient, in itself, to satisfy the requirement for *aequalitas* in such contracts.⁵¹

⁴⁹ Innocent IV, *Super Libros Quinque Decretalium*, 517rb: “Ex forma huiusmodi contractus, non potest censerī usurarius ex forma, quia venditio est, et non mutuum, et in mutuo tantum intervenit usura. Cf. Noonan, *Usury*, 155.

⁵⁰ I consider the growing recognition of the role of “common estimation” in the determination of just price and value, so crucial to the development of medieval price theory, in Chapter 2 below.

⁵¹ Innocent IV, *Libros quinque*, V.19.5 (517rb): “Ex hac decretali satis innuitur, quod si aliquis pro certa pecuniae quantitate emeret aliquem redditum grani, vel vini, vel alium consimile perpetuo sibi et suis haeredibus dandum a venditore et suis haeridibus, vel ad certum tempus, vel ad tempus vitae alicuius, quod licitus est huiusmodi contractus, dummodo *redditus* annuus communi aestimatione non excedat redditum quem haberet, vel habere posset, si terram de tanta pecunia emisset. Et si excedat communiter, non est licitus contractus.” See Veraja, *Contratto di censo*, 37-39. For the opinion of the eminent Italian jurist, Baldus de Ubaldis, writing at the end of the fourteenth century, on this

Pope Innocent's position here at the middle of the thirteenth century, while applied only to contracts of sale, nevertheless confirmed the general principle (as stated in *Naviganti*), that probable doubt relaxes and reshapes the requirement of equality in all contractual forms. It reveals with great clarity the difficulties that arguments constructed to maintain the ideal of perfect numerical equality in the *mutuum* would face from this time forward. If probable doubt excuses usury, the question arises: in what loan contract, indeed, in what economic exchange of any kind, is doubt not present? When even the broad mathematical limits of legal sale price can be ignored because of the uncertainty and approximation built into census contracts, the definition of exchange equality becomes ever more destabilized, and the quest for some test of equality between exchangers ever more problematic. But the test remained and the search remained.

For Pope Innocent, the test became whether the terms agreed to (i.e., the sum of the annual payment in proportion to the sum originally given) fell within the price bounds of "common estimation," and if they exceeded those bounds, the contract was to be judged unequal and illicit.⁵² But how was a judge or priest or confessor to make this determination? From the mid-thirteenth century at the latest, those who were called upon to judge the liceity of such contracts were required to make themselves intimately familiar with the vagaries of the marketplace if they were to be knowledgeable about "common prices" and their variation over time. They were, in effect, required to recognize the complex and ever shifting workings of commercial agreement and exchange, required to consider the changing relations between parties to a contract and their varying chances of gaining or losing, and required to comprehend the intricate movement of prices and its causes. The

form of equalization, see Franklin, "Ancient Legal Sources of Seventeenth-Century Probability," 128-2.

⁵² Innocent IV, *Libros quinque*, V.19.5 (517rb): "Et si excedat communiter, non est licitus contractus." On this subject, see McLaughlin, "Teaching of the Canonists," 118-19.

capacity to comprehend these subjects, in turn, required observers, whether lawyer or theologian, to “think” with probabilities, proportionalities, estimations, and sliding scales. As they did so, not only their determinations concerning which contractual forms conformed to the requirement of equality changed, but so too did their very sense of what *aequalitas* might look like.

Models of Equality and Equalization in Aristotle’s Analysis of Economic Exchange, *Nicomachean Ethics*, Book V

Interpretations and positions on how to fit doubt and risk to the requirements of equalization in the loan contract continued to evolve over the second half of the thirteenth century. Two contributors to this debate, the theologians Thomas Aquinas and Peter of John Olivi, offer revealing views into its shape and direction, and I will focus on their opinions in the pages that follow. Before turning to them, however, I turn to consider a crucial intellectual development of the mid-thirteenth century that intervened between the debates thus far considered and the theological speculations on equality and usury found in the writings of Thomas and Olivi: the appearance of Robert Grosseteste’s first complete Latin translation of Aristotle’s *Nicomachean Ethics* from the Greek (1246-47), which included the first Latin translation of Aristotle’s profoundly insightful analysis of money and exchange in Book V.⁵³

The first point to make concerning this text, is that Aristotle, fully as much as Gratian and the scholastics who followed him, situated his discussion of economic exchange squarely within the context of justice, equality, and forms of equalization. Indeed, in *Ethics* Book V Aristotle analyzed forms of equality and equalization with

⁵³ For more on the history of this text and its Latin translation, with a focus on its pivotal place in scholastic thinking on justice and equality, see my *Economy and Nature in the Fourteenth Century*, esp. 37-78.

a thoroughness and acuity far surpassing any discussion of the subject previously available within scholastic culture. Due in large part to its penetrating focus on these topics, the impact of Aristotle's discussion in *Ethics V* was profound and long lasting, not only on scholastic economic thought but on all disciplines centered on the concern to attain and maintain *aequalitas*, which is to say, on the great majority of scholastic disciplines.⁵⁴ In the area of economic thought, the primary contribution of Aristotle's discussion was to add definitional precision and theoretical structure to a scholastic analysis of exchange *aequalitas* that, with its grounding in the close observation of economic life and its inheritance from Roman and canon law, had already achieved a high degree of sophistication *before* its reception. From its reception forward, the text of *Ethics V* provided an additional analytical lens through which to view and interpret the ever-evolving dynamic of urban exchange as a process of equalization.

In Book V chapters 3-5, Aristotle considers the process of economic exchange and the function of money within that process as intellectual problems with their own proper modes of description and analysis. Within the *Nicomachean Ethics* as a whole, Book Five containing the analysis of money and exchange was given particularly close scrutiny by scholastic readers, since it was at the same time the site of Aristotle's most detailed discussion of Justice, a subject of paramount concern to medieval thinkers. Aristotle's decision to place his discussion of money and economic exchange in the context of his detailed analysis of *justitia* had important consequences, not least for the history of economic thought. The conjuncture gave great support to the position that economic activities, such as producing, exchanging, buying, selling, and the use of money itself, could be sites of order and

⁵⁴ Due to its importance and lasting influence, I have occasion to refer to Aristotle's analysis of equality and forms of equalization at many points in the chapters that follow.

justice, governable by the logic and mathematics of equality and equalization.⁵⁵ Aristotle's unambiguous provision of equalization and order as the context of economic exchange served as a textual bridge between the everyday experience of economic life and intellectual models that could be constructed to comprehend and represent it. The text of the *Ethics* thus contributed to the transformation of the medieval conception of money and the marketplace from sites of corruption, dislocation, and imbalance to potential sites of equalization and justice, deserving of a place at the center of social organization.

Justice as Mathematical Equalization in *Ethics* V

The first thing to note about Aristotle's definition of justice is how thoroughly mathematical it is and how central the concept of proportionality is to it. He writes: "The just, then, is the proportionate; the unjust is that which violates proportion."⁵⁶ For Aristotle, all forms of justice are directed toward the attainment of an appropriate mean or *medium*. Working from this base, he separates justice into two particular forms, 1) distributive justice (*iustitia distributiva*), and 2) rectificatory or directive justice (*iustitia directiva*), each form characterized by the mathematical process of equalization proper to it. Distributive justice, the first species he considers, is characterized by proportional equalization. To illustrate this form,

⁵⁵ Fabian Wittreck, *Geld als Instrument der Gerechtigkeit: Die Geldrechtslehre des Hl. Thomas von Aquin in ihrem interkulturellen Kontext* (Paderborn, 2002).

⁵⁶ The Latin I cite in the notes is taken from the revised version of Robert Grosseteste's mid-thirteenth century (1246-47) translation, dated to c.1260: *Ethica Nicomachea: Translatio Roberti Grosseteste Lincolniensis, recensio recognita*, R. A. Gauthier (ed.), *Aristoteles Latinus*, 26, 1-3, Fasc. 4 (Leiden, 1973). This revised version remained the most widely used Latin text of the *Ethics* through the fifteenth century. For the English translation I rely primarily on W.D. Ross, in Richard McKeon (ed.), *The Basic Works of Aristotle* (New York, 1941), although I emend his translation at some points to bring it into line with the medieval Latin text. *Ethica* [1131b16], *Arist. Lat.* 26 (1973), 459: "Iustum quidem igitur hoc proporcionale. Iniustum autem quod preter proporcionale."

Aristotle provides an example in which a central authority (e.g., the *civitas*) distributes benefits or rewards to its citizens in proportion as they have proved themselves worthy of reward through service or contribution. Since the quality and amount that men contribute and are capable of contributing is inherently unequal, distributive reward requires the establishment of (in Aristotle's terms) a "geometrical" rather than an "arithmetical" equivalence; that is, a proportional equivalence in which greater service justly receives a proportionally greater reward.⁵⁷ In this context Aristotle states a rule: in cases where the contribution has been unequal, to award all with an identical (i.e., "arithmetically" equal) reward would be manifestly *unequal* and unjust.⁵⁸ Aristotle extends the form of distributive justice to cover certain economic practices current in his society. He specifically includes partnerships under *iustitia distributiva*, noting that funds drawn from the partnership "will be according to the same proportion as the funds [the partners] put into the business bear to one another."⁵⁹ Note the echoes here between Aristotle's *iustitia distributiva* and the proportional equivalences that canonists from the late twelfth century (which is to say, long before the text of the *Ethics* was in circulation) brought into play in their analysis of credit contracts.

Where distributive justice establishes a proportional equivalence between assumed unequals, Aristotle's second named form of justice, *iustitia directiva*, applies "arithmetical" equalization to cases in which the participants are assumed to be and are treated as equals.⁶⁰ In cases governed by *iustitia directiva* there is presumed to be an equalizing midpoint between the claims of two contesting parties. The judge,

⁵⁷ *Ethica* [1131b12-14], *Arist. Lat.* 26 (1973), 459: "Vocant autem talem proporcionalitatem geometricam mathematici."

⁵⁸ This rule holds profound implications for the determination of equality in usury theory. It will be discussed below in regard to the position on usury adopted by Thomas Aquinas.

⁵⁹ *Ethica* [1130b29-30], *Arist. Lat.* 26 (1973), 459: "et enim a pecuniis communibus si fiat distribucio, erit secundum proporcionem eandem quam habent ad invicem illatam"

⁶⁰ *Ethica* [1131b25-32b20], *Arist. Lat.* 26 (1973), 459: "Reliqua autem una directivum."

who considers the relative gain and loss of two parties after the fact of an unequal exchange, reaches this midpoint through the arithmetical processes of addition and subtraction – adding to the one who has excessively lost and taking from the one who has excessively gained.⁶¹ In the text of the *Ethics*, “directive” justice is also called “rectificatory” or “corrective” because it applies to those cases in which equality is restored through the interventions of a judge or orderer, after the exchange itself has taken place. The image Aristotle employs here is of the judge bisecting the line of gain and loss to arrive at a balancing point.⁶²

Although Aristotle here writes of the comparison and bisection of lines, the image of the mechanical scale – the iconographic representation of justice – lies in the background. Indeed, his discussion of *iustitia directiva* provided a name, defining characteristics, and mathematical precision to a model of arithmetical equalization that had previously remained unnamed, even though it had occupied a central place in usury theory from the time of Gratian’s *Decretum*. At the very same time, however, *Ethics V* provided the name, defining characteristics, and mathematical logic governing an *alternative* model of equalization, *iustitia distributiva*, whose proportional requital is utterly inconsonant with the kind of arithmetical equality traditionally required in usury theory. And yet here, in Aristotle’s scheme, it is fully and equally identified as a species of justice and equality.

After describing the mathematical forms of distributive and directive justice, Aristotle introduces the concept of reciprocity (*contrapassum*), and it is this third, hybrid form of equalization that he identifies with the types of economic exchange common to life in the *civitas*: buying, selling, the exchange of labor and services, and

⁶¹ *Ethica* [1132b24-29].

⁶² *Ethica* [1131b24-29].

the production of goods for exchange between individual exchangers.⁶³ Since Aristotle's discussion of economic *contrapassum* is particularly germane to the determination of value in exchange, I will withhold my treatment of it until the following chapter dedicated to the scholastic discourse on price and value. Aristotle then follows his exploration of *contrapassum* in exchange with a rich, insightful, and remarkably compressed analysis of the form and function of money in exchange. This topic, too, pertains directly to the following chapter on price and value, and I consider it there, but since questions relating to the equalization of monetary sums in the *mutuum* are dependent on assumptions concerning money itself, it is also highly relevant to the subject of usury.

Money as an Instrument of Equalization in *Ethics* V

In a passage that is often expanded upon by medieval commentators, Aristotle equates the very survival of human industry, and thus the survival of the *civitas* itself, with the establishment of *proportional equivalences* in economic exchange.⁶⁴ Aristotle's fixation (not at all too strong a word) on the finding of equality in economic exchange necessarily brought him to questions of measurement and commensurability. How, he asked, can equivalences be established between diverse people exchanging diverse goods of diverse quality involving diverse labors and skills of production? This question was paramount,

⁶³ On Aristotle's exclusion of commercial exchange from his discussion, see Kaye, *Economy and Nature in the Fourteenth Century*, 52-55.

⁶⁴ *Ethica* [1133a15-17], *Arist. Lat.* 26 (1973), 462-63: "Oportet igitur hec utique equari. Est autem hoc et in aliis artibus. Destruentur enim si non fecerit faciens et quantum et quale et faciens hoc et tantum et tale." This statement is considered to be an interpolation by certain modern editors. Nevertheless, it appears in both the first Grosseteste translation of the *Ethics* and in its authoritative revision, and it was often glossed by medieval commentators. On this subject, see Odd Langholm, *Economics in the Medieval Schools: Wealth, Exchange, Value, Money, and Usury According to the Paris Theological Tradition* (Leiden, 1992), 189.

since he believed that without a means to insure equalization between exchangers, exchange would not take place, and without exchange, the *civitas* would not hold together.⁶⁵

For it is not two doctors that associate for exchange, but a doctor and a farmer, and in general people who are different and unequal; *but these must be equated*. This is why all things must somehow be comparable for there to be exchange.⁶⁶ (My emphasis)

In Aristotle's scheme, it is money that provides the solution to the thorny problem of comparison and commensuration in exchange.

It is for this end that money has been introduced, and it becomes in a sense an intermediate (*aliqua liter medium*); for it measures all things, and therefore the excess and the defect (*et superhabundanciam et defectum*) -- how many shoes are equal (*equale*) to a house or to a given amount of food.⁶⁷

⁶⁵ *Ethica* [1132b31-34], *Arist. Lat.* 26 (1973), 462: "per contrafacere enim proporcionale commanet civitas"

⁶⁶ *Ethica* [1133a17-20], *Arist. Lat.* 26 (1973), 463: "Non enim ex duobus medicis fit communicacio, set ex medico et agricola, et omnino alteris, et non equalibus; *set hos oportet equari* (my emphasis). Propter quod omnia comparata oportet aliqua liter esse, quorum est commutacio"

⁶⁷ *Ethica* [1133a20-22], *Arist. Lat.* 26 (1973), 463: (continuing) "propter quod omnia comparata oportet aliqua liter esse, quorum est commutacio; ad quod nummista venit, et fit aliqua liter medium. Omnia enim mensurat, quare et superhabundanciam et defectum. Quanta quedam utique calciamenta, equale domui vel cibo." Note the use of the term *superhabundanciam* here to express the idea of excess -- a term well known to scholastics from its place in the *Decretum* as the definition (initially by St. Jerome) of usurious inequality.

But in what sense are multiple pairs of shoes said to be “equal” to a house? What is the meaning of “equal” here, given the inescapable value inequalities (*superhabundanciam et defectum*) attached to the skill of every producer and to the “labor and expenses” attached to all goods in exchange? Aristotle’s answer is that the equality aimed for is never arithmetical, never fixed at 1:1, but always fluid and geometrically proportional.⁶⁸

If, then, first there is proportionate equality of goods (*proportionalitatem equale*), and then reciprocal action (*contrapassum*) takes place, the result we mention [just exchange] will be effected. If not, the exchange is not equal, and does not hold (*non equale, neque commanet*); for there is nothing to prevent the work of the one being better than that of the other; they must therefore be equated.⁶⁹

Nowhere, as we have seen, were medieval thinkers more in line with Aristotle than in their agreement that just exchange was a process of equalization. Although before the reception of the *Ethics*, canon law decisions on credit contracts never specified what forms of equality they were employing with the clarity and mathematical precision that Aristotle brought to the subject, nevertheless, like Aristotle, they were moving toward the recognition that only a modified form of proportional equalization, such as that embedded in mutual agreement, could

⁶⁸ *Ethica* [1132b31-34], *Arist. Lat.* 26 (1973), 462: "Set in concomitacionibus quidem commutativis continet tale iustum contrapassum secundum proportionalitatem et non secundum equalitatem; per contrafacere enim proportionale commanet civitas"

⁶⁹ *Ethica* [1133a 11-14], *Arist. Lat.* 26 (1973), 462: "Si igitur primum sit secundum proportionalitatem equale, deinde contrapassum fiat, erit quod dicitur. Si autem non, non equale, neque commanet. Nichil enim prohibet melius esse alterius opus, quam alterius. Oportet igitur hec utique equari."

accommodate the open-ended nature of risk and doubt and the inequality of gain and loss built into the loan contract. With the intellectual ground well prepared for it, the text of the *Ethics* had a deep and lasting influence on the scholastic discourse of *aequalitas* in exchange, but its influence extended far beyond the economic sphere as well. Every medieval discourse that was constructed around the ideal of equality, or the finding of the mean, or the establishment of justice, or the maintenance of order, made use of it, and there were very few scholastic discourses that did not. After the Latin translation of the *Ethics* in the mid-thirteenth century, and the subsequent dissemination of its lessons in the schools, scholars had the great advantage of the clarity and mathematical framing Aristotle brought to the modeling of forms of equalization. But perhaps it is already apparent: along with the benefits of clarity, Aristotle's lessons here would bring serious problems and hurdles to a theorization of usury still linked to the authority of Gratian's canons in the *Decretum*. We can, I think, see this dual heritage clearly in the writings on usury of Thomas Aquinas.

Models of Equality and Equalization in Thomas Aquinas' Writings on Usury

The importance of St. Thomas Aquinas (1225-74) to the development of usury theory has at times been overstated. He derived many of his technical arguments directly from Roman and canon law, with further borrowings from earlier theological writings on the subject and, after 1250, from the writings of Aristotle. Although he came back to the question of usury a number of times, and although he clearly thought the question important, he devoted only a tiny fraction of his writings to it or, in general, to subjects we would now consider to have an "economic" component. While his discussion of usury was largely derivative, I

want to argue that the arguments he put forth represent an extremely careful and narrow choice taken from the wide array of arguments available to him. Indeed, the closer one looks at his writings, both early and late, the more careful and more narrow his choices appear. His caution, I believe, resulted in large part from his remarkable sensitivity to the changing definitions of the major terms in the equation of usury: money, nature, and equality itself. The profound shift in meaning of these three constituent terms over the course of the thirteenth century, when fully comprehended, rendered many of the oldest and most commonly held positions on usury, some dating back to the *Decretum*, untenable. It is not, then, Thomas' status as an innovative "economic" thinker that has led me to focus here on his writings, but rather his sensitivity to changing definitions and their implications.

In a number of respects, the positions held by medieval theologians on usury differed from those of the lawyers. Although often informed and influenced by canon law on the subject, theologians were generally more conservative with respect to the justification of *interesse*.⁷⁰ Thomas accepted the principle of *damnum emergens*, the lender's right to compensation for actual damages caused by the contractual failure of the borrower.⁷¹ But he was considerably more sensitive than Hostiensis to the philosophical implications of *lucrum cessans*.⁷² He denied the lender's right to require compensation for lost future profits that were merely possible, on the basis that doing so involved selling what had only *probable* rather than real existence. He wrote: "one should not sell something which one has not yet got and which one may

⁷⁰ Ibanès, *La doctrine*, 41-42.

⁷¹ Thomas Aquinas, *Summa theologica* [hereafter, *ST*], 2,2,78,2, ad 1: "ille qui mutuuum dat potest absque peccato in pactum deducere cum eo qui mutuuum accipit recompensationem damni, per quod subtrahitur sibi aliquid quod debet habere; hoc enim non est vendere usum pecuniae, sed damnum vitare."

⁷² Ibanès, *La doctrine*, 26-27; Noonan, *Usury*, 117.

be prevented in many ways from getting."⁷³ Thomas' distinction between what is "merely" probable and what is real was crucial to his position on equality in the loan contract.

Before the full text of the *Ethics* became available in Latin, Thomas had been fully engaged in the process of integrating the thought of Aristotle with the intellectual tradition of Christian theology and law. He was introduced to the *Ethics* through the lectures of his mentor, Albertus Magnus, in Cologne (ca. 1250), shortly after its first complete Latin translation appeared. Albert used these lectures as a basis for writing the first scholastic commentary on this work, which he followed with a second commentary a decade later (ca. 1270), and only then did Thomas follow suit with his own (ca. 1271).⁷⁴ Thomas' commentary to Aristotle's analysis of money and exchange in Book V of the *Ethics* reveals not only that he fully grasped the elements in Aristotle's argument but that he was capable of clarifying the text and reinforcing its insights. In this he was aided by his thorough knowledge of Roman and canon law writings on economic questions and by his own close observation of economic life.

Problems Introduced by Aristotle's Analysis of Exchange Equalization

Thomas' commentary to Aristotle's discussion of money in the *Ethics* provides evidence of his comprehension of each of its major points: that money

⁷³ *ST* 2,2,78,2 ad 1: "Recompensationem vero damni quod consideratur in hoc quod de pecunia non lucratur non potest in pactum deducere, quia non debet vendere id quod nondum habet, et potest impediri multipliciter ab habendo."

⁷⁴ I am following the edition, *Sancti Thomae de Aquino sententia libri ethicorum*, vol. 47(2) in *Opera omnia* (Rome, 1969) [hereafter, *Ethics*]. There has been controversy over the dating of this work. I follow R.-A Gauthier, "La date du commentaire de saint Thomas sur l'Éthique à Nicomaque," *RTAM* 18 (1951), 66-105. For a more recent confirmation, see Jean-Pierre Torrell, *Saint Thomas Aquinas. The Person and His Work*, vol. 1, Robert Royal (trans.) (Washington, 2005), 227-28.

functions 1) as a common measure, graded and numbered to facilitate its measuring function;⁷⁵ 2) as a divisible measuring line, capable of being added to and subtracted from, so that ever fluctuating gain and loss in economic exchanges can be equalized;⁷⁶ 3) as a medium of *relation*, serving as the mid-term in the exchange of goods, permitting the wide array of goods and services to find comparison and commensuration;⁷⁷ 4) as an instrument of proportionalization, facilitating the dynamic equalization (*contrapassum*) of exchange;⁷⁸ 5) as a continuous connecting *medium*, literally binding the *civitas* as it brings together producers and consumers of widely varying goods and services.⁷⁹ Moreover, Thomas noted and supported Aristotle's observation that while the value of money should ideally remain stable (the better to serve as the universal medium of measurement and commensuration) in fact it often did not, fluctuating (as the values of goods themselves were understood to fluctuate) in response to changing conditions.⁸⁰ Although Thomas seems to accept each of these characteristics without hesitation in his *Commentary on*

⁷⁵ Aquinas, *Ethics* V.9 (1969), 294, comment to [1133a19-30]: "Et ad hoc inventum est nummismata, id est denarius, per quem mensurantur pretia talium rerum, et sic denarius fit quodam modo medium, in quantum scilicet omnia mensurat et superabundantiam et defectum"

⁷⁶ Aquinas, *Ethics* V.9 (1969), 295, comment to [1133b19-23]: "res tam differentes impossibile est commensurari secundum veritatem unde oportet esse unum aliquid quo omnia huiusmodi mensurentur . . . unde etiam vocatur nummismata"

⁷⁷ Aquinas, *Ethics* V.9 (1969), 294, comment to [1133a19-30]: "oportet quod omnia illa quorum potest esse comutatio sint aliquantulum ad invicem comparabilia. . . . Et ad hoc inventum est nummismata."

⁷⁸ Aquinas, *Ethics* V.9 (1969), 295, comment to [1133a31-b4]: "quando fit commutatio rerum oportet ducere res comutandas in diametralem figuram proportionalitatis."

⁷⁹ Aquinas, *Ethics* V.8 (1969), 291, comment to [1132b33]: "quod iustum commutativum contineat contrapassum secundum proportionalitatem, quia per hoc commanent cives sibi invicem in civitate quod sibi invicem proportionaliter contrafaciunt. . . ." In Aristotle's analysis, seconded by Aquinas, money is the instrument that facilitates the proportional equalization which binds the *civitas*.

⁸⁰ Aquinas, *Ethics*, V.9 (1969), 295, comment to [1133b10-14]: "non semper est eiusdem valoris; sed tamen taliter debet esse institutus ut magis permaneat in eodem valore quam aliae res." On the limited fluctuation of the value of money compared to other goods, see Wittreck, *Geld als Instrument der Gerechtigkeit*, 237-44.

Aristotle's *Ethics*, the logical implications of any one of them would, I maintain, render it difficult if not impossible for him to also accept the assumptions about money that underlay Gratian's insistence on arithmetical equality in contracts of loan. Yet Thomas set himself the task of constructing an absolute argument against usury in a way that would be consistent with the ancient canons.⁸¹ The strength and lasting influence of his argument mask the serious problems he was forced to work around and overcome. Behind the seeming naturalness of the product lies the reality of very strenuous and purposeful construction.

The Engineering of Thomas' Argument

The two most complete of Thomas's later treatments of the question of usury appear in the *De malo* (ca. 1268-70), question 13, article 4 and in *Summa theologica* II,II, question 78 (ca. 1270-72).⁸² Some general statements can be made about both. Although he suggests that men should be motivated to lend by friendship and charity without hoping for reward, his goal is not to show that demanding usury is a sin against charity. Rather, it is to demonstrate that usury is a sin against *justice*, and in particular, that aspect of justice that is quantifiable and knowable – *aequalitas* – an *aequalitas*, moreover, that is as precisely numerable and knowable as the equality found in Gratian's canons. Thomas makes this crystal clear in the opening words of the first *responsio* in *Summa theologica* II, II, 78: "It is said," he

⁸¹ The dimensions of this project are explored in Giacomo Todeschini, "Ecclesia et mercato nei linguaggi dottrinali di Tommaso d'Aquino," *Quaderni storici* 105 (2000), 585-621.

⁸² There is debate over the exact chronology of these questions. I generally follow J. A. Weisheipl, *Friar Thomas D'Aquino: His Life, Thought, and Works* (Washington, D.C, 1983). Weisheipl (210-12) discusses the contested datings of *De malo* but notes the general consensus that the treatment of usury in the *De malo* was completed before Thomas began work on *ST* II, II (1270-72). Cf. Todeschini, "Ecclesia," 586; Noonan, *Usury*, 51, n. 48, following Grabmann. The edition of the *De malo* I use: *Quaestiones disputatae De malo*, vol. 23 in *Opera omnia* (Rome, 1982).

writes, “that to accept usury for the money that has been lent is in itself unjust, because it is to sell that which does not exist, which clearly constitutes inequality (*inaequalitas*) and is contrary to justice.”⁸³

To support this claim, Thomas constructs an argument that rests in part on Roman law and in part on definitions developed within the canon law tradition after Gratian.⁸⁴ He posits that in the loan (*mutuum*), the lender transfers ownership of money to the borrower (which distinguishes the *mutuum* from the rent contract, or *locatio*, in which ownership is retained by the owner). He argues that in abandoning his ownership of the money, the lender loses his right to then charge the borrower for its use.⁸⁵ Thomas defines usury as, in essence, the lender’s selling the use of the money he lends that is no longer his to sell, since it has been already been transferred to the borrower. The money the lender provides is, in effect, *consumed* in the act of lending, or so Thomas argues. In support of this argument he could draw on the canons in Gratian that linked money with other measurable and “fungible” commodities such as wine, wheat, and oil, which are literally consumed in their use.⁸⁶

⁸³ The Latin edition of the *Summa theologiae* I follow [hereafter *ST*] is the Leonine edition (Rome, 1888-1895), which can be accessed at www.corpusthomisticum.org. Since the Latin edition is readily available, I include the Latin text in the notes only where I quote directly from it or where the wording is particularly revealing. English translations are for the most part from *Summa Theologiae* (New York: Blackfriars, 1964-81), with modifications noted. Thomas, *ST*, II, II, 78, 1 resp.: “Dicendum quod accipere usuram pro pecunia mutuata est secundum se injustum, quia venditur id quod non est; per quod manifeste inaequalitas constituitur, quae iustitiae contrariatur.”

⁸⁴ McLaughlin, “Teaching of the Canonists,” 99 ff.

⁸⁵ This argument is present in Thomas’ earliest writing on usury (c. 1254-56), *In quattuor libros Sententiarum*, Book 3, distinction 37, 1-6. As I noted above, in Roman law fungible goods have two qualities that set them apart from all other goods whose use can legitimately be charged for: 1, they can be freely exchanged (or replaced) by another of like kind and identical quantity in the satisfaction of an obligation, and 2, such substitution is necessary because the fungible (wheat, wine, etc.) is consumed in its use, so the original cannot be returned.

⁸⁶ Gratian, *Decretum*, II, 14, 3, c.1 and c.4.

It is clear that money falls under the category of a fungible good in one of its senses: it can be freely replaced by another of like kind and identical quantity in the satisfaction of an obligation. But that it fulfills its second accepted sense, that it is consumed in its use, is considerably more questionable and difficult to establish – and certainly to establish with the kind of universal validity that Thomas is searching for. To bolster this problematic point, Thomas employs the authority of Aristotle: “According to the Philosopher (Aristotle) money was invented primarily to facilitate exchange, and in performing this function it is consumed in its use.”⁸⁷ Although Thomas leans on the authority of Aristotle here, nowhere in the *Ethics* does Aristotle link money’s facilitation of exchange with its consumption. Nevertheless, from this statement on, Thomas considers that he has established this essential element in his case against usury.⁸⁸ With this point assumed, Thomas can argue that when a person lends money, he transfers at the same time its substance, its use, and its ownership (*dominium*) to the borrower. If the usurer then charges the borrower *ultra sortem* for the use of the money loaned, he is either selling what does not exist, or what is not his to sell, or he is selling the same thing twice (*unde vendit id quod non est vel vendit idem bis*). In either case, he creates an unwarranted and *unnatural* excess (*superhabundantia* in Gratian’s terms) and in doing so he violates the equality built into both natural justice and nature itself.⁸⁹

⁸⁷ *ST*, II, II, 78, 1, resp. “Pecunia autem, secundum Philosophum, principaliter est inventa ad commutationes faciendas, et ita proprius et principalis pecuniae usus est ipsius consumptio, sive distractio secundum quod in commutationes expenditur.”

⁸⁸ Thomas follows the same pattern in the *De malo* (Q. 13, art.4, resp.), joining the argument equating consumption and use to a generalized citation from Aristotle: “ita etiam et proprius usus pecuniae [est] ut expendatur pro commutatione aliarum rerum: sunt enim inventa nummismata commutationis gratia, ut Philosophus dicit in II *Politice*.”

⁸⁹ The argument in *ST*, II, II, 78, 1, resp. is identical to that in *De Malo*, Q. 13, art. 4, resp.: “Set in illis rebus quarum usus est earum consumptio non est aliud usus rei quam ipsa res, unde cuicumque conceditur usus talium rerum conceditur etiam et ipsarum rerum dominium et e converso. . . . usus autem pecuniae ut dictum est, non est aliud quam eius

My purpose here is not to focus on the problems that exist in Thomas' argument against usury.⁹⁰ What I find more telling is what he does *not* say, the Aristotelian insights he intentionally omits and ignores and even the traditional Christian elements in the argument against usury that he jettisons in his attempt to construct a natural law case against it. Here, I want to argue, that the negative aspects of Thomas' argument – the traditional points he abandons in his case against usury – can tell us as much about the pressures on the redefinition of economic *aequalitas* in the thirteenth century as can the already noted positive contributions of canonists such as Hostiensis and Pope Innocent IV. For someone who was not only fully familiar with Aristotle's treatment of justice, equality, and exchange in *Ethics* 5, but who actually refined and expanded on Aristotle's analysis in his commentary, it is striking that Thomas abandoned the most insightful aspects of this discussion in his final formulations on usury. Aristotle had established one point beyond doubt: that it was impossible to talk about justice or equality in exchange without talking about proportionality.⁹¹ Yet there is not a single word about proportionality in all of Thomas' writings on usury.

substantia, unde vendit id quod non est vel vendit idem bis, ipsam scilicet pecuniam cuius est consumptio eius, et hoc est manifeste contra rationem iustitiae naturalis. . . ."

⁹⁰ Many of the problems in his presentation were realized in the following generations: Johannes Andreae, the great canonist, and the theologian Henry of Ghent, were among those who recognized that money cannot be said, by definition, to be consumed in its use. This, they saw, held especially true in the loan contract, where the lender actually retains the money he lends by contract, and sells to the borrower not the money *per se* but only the *right* to use the money for a particular length of time. On this, see Noonan, *Usury*, 60-65; Odd Langholm, *The Aristotelian Analysis of Usury* (Bergen, 1984), 81 ff. Other critics, such as Duns Scotus and Peter Olivi, questioned the necessary identification of money's use, substance, and ownership from a Franciscan perspective, as discussed further below.

⁹¹ On Thomas' recognition of this point, see *Ethics* V.8 (1969), 291: "quod iustum commutativum contineat contrapassum secundum proportionalitatem, quia per hoc commanent cives sibi invicem in civitate quod sibi invicem proportionaliter contrafaciunt"

Indeed, how could there be? Attaching even the slightest notion of proportionality to the *mutuum* would destroy the ancient requirement for a perfect and simple numerical equality that lay at its core. If the lender is likely to give more or suffer more from the loan than the borrower, or if the borrower is likely to benefit more from the loan than the lender (both of which are more than likely), then the application of proportional equalization to the *mutuum* would *require* a numerically *unequal* return, would *require* the introduction of a proportioned *interesse* into the structure of the loan contract in recognition of the inequalities involved.⁹² A second major omission: in all of Thomas' writings on usury, there is no hint of the central insight from the *Ethics* that economic value is *relative* value, determined by a variable need or *indigentia* that is relative to time, place, and circumstance.⁹³ But of course notions of relative value and of a relative need measurable by money would destroy the requirement for numerical *aequalitas* in the loan contract, where the needs of the borrower and lender are utterly different as are their gains and losses from the exchange.

It was not, however, only the lessons about exchange equalization from Aristotle's *Ethics* that Thomas ignored. He also passed over the many developments within thirteenth-century canon law that destabilized and, indeed, subverted the simple definition of arithmetical equality so clearly and unproblematically asserted in the *Decretum*. And there is yet an even more revealing omission. In his most mature positions in the *De malo* and the *Summa theologica*, he has jettisoned most of

⁹² Traces of this reasoning can be seen in the Roman law, which permitted the unequal positions of lender and borrower to find reflection in a permissible proportional interest on loans.

⁹³ For Thomas' comprehension and acceptance of this point, see *Ethics* V.9 (1969), 294b-95a: "Hoc autem unum quod omnia mensurat, secundum rei veritatem est indigentia, quae continet omnia commutabilia, in quantum scilicet omnia referuntur ad humanam indigentiam; non enim appetiuntur res secundum dignitatem naturae ipsorum; alioquin unus mus, quod est animal sensibile, maioris pretii esset quam una margarita, quae est res inanimata; sed rebus pretia imponuntur secundum quod homines indigent eis ad suum usum." Discussed in greater detail in Chapter 2 below.

the traditional Christian *moral* and *ethical* argument against usury, based in the ethics of the *personal* exchange between lender and borrower, which had been so central to the reasoning in the *Decretum* and in later canon law. Why would he do this?

There is ample evidence that Thomas was well aware of the actual pre-existing inequalities between borrower and lender built into the *mutuum*. One of the striking things about his later treatments of usury is his clear and unabashed recognition that borrowers gain from the loans they receive, even from loans contaminated by usury, even from loans that contractually require a repayment beyond the sum lent. The clearest statements of this recognition in the *ST* and the *De malo* come when he explains why moderate usury is acceptable within Roman law.

Summa theologica: Human law allows usury not because it judges it to be commensurate with justice but because to deny it would be to impede the utility (*utilitates*) of many.⁹⁴

De malo: The positive law permits usury because of the many benefits (*multas commoditates*) that result from the lending of money, even from usurious lending.⁹⁵

Given his recognition of the “*utilitates*” and “*commoditates*” offered by usurious contracts, and his awareness of the lessons of proportionality and relativity

⁹⁴ *ST*, II, II, 78, 1, ad 3: “Et ideo usuras lex humana concessit, non quasi existimans eas esse secundum iustitiam, sed ne impedierentur utilitates multorum.” The official Dominican translation of this passage from Latin to English (London, 1964) appears intent to overlook Thomas’ acceptance of usury’s evident benefits: “Human law, therefore, allows the taking of interest, not because it deems this to be just but because to do otherwise would impose undue restrictions on many people.”

⁹⁵ *De Malo*, q.13, art.4, ad 6. “Et hoc modo ius positivum permisit usuras propter multas commoditates qua interdum aliqui consequuntur ex pecunia mutuata, licet sub usuris.”

conveyed in Aristotle's *Ethics*, and his knowledge of canon law decisions expanding exchange *aequalitas* through the recognition of probability, risk, and doubt, it would be hard if not impossible for him to deny that the probability of benefits to the borrower and losses to the lender would in many cases require an arithmetically *unequal* return, if this relationship itself were made the basis of the equation.

But if he can no longer locate the inequality of usury in the personal relationship between lender and borrower, where then can he locate it? When we look closely at the kind of inequality that forms the basis of his case, we can see that it is not, in essence, personal, social, moral, or ethical: it is formal and definitional. At its core is the rigid definition of money that insists on its being consumed in its use and that charging separately for its use involves either selling something that does not have a separable existence or selling the same thing twice.⁹⁶ I suggest that Thomas chose this highly selective and narrow path because social and economic pressures on the conceptualization of *aequalitas* made him aware of new definitional traps on every side. His options were extremely limited if his intent was to continue to support the traditional ideal of perfect numerical equality between sum lent and sum returned in the intellectual culture of the later thirteenth century. He had first to eliminate the actual elements and processes of equalization at work between real individuals in real exchanges, which he accomplished by shifting the basis of his argument to the realm of highly restricted formal definition. Then a more difficult task faced him: to choose and construct an abstraction that could serve him as an absolute and impersonal arbiter of *aequalitas* in the *mutuum*, one that would hold true despite the ever-shifting contexts of exchange. It must be an abstraction capable of standing detached from actual economic transactions -- detached from

⁹⁶ The sense of the personal remains present in Thomas' insistence that the borrower may voluntarily choose to recompense the lender in recognition of the aid and charity represented by his loan, but this voluntary recompense is defined as outside the law and outside the equalization required by nature.

inescapable inequalities and uncertainties, relativized and ever-shifting values, monetary instabilities, and the like. He chose overarching Nature as that abstract arbiter.⁹⁷

In his final position on the question of usury, Thomas defines the slightest numerical difference between sum lent and sum required in return as a violation of “natural equality,” and hence, *in itself* (i.e. divorced from any and all particular contexts) as a sin against “natural justice” (*secundum se peccatum: est enim contra iustitiam naturalem*).⁹⁸ Nature has become the judge with the authority to define *aequalitas* and *justitia* in a way that brooks no alteration or expansion.⁹⁹ And nature is also now, first and foremost, the injured party. Since Thomas recognized that borrowers can in many cases benefit from even usurious loans, the inequality at the root of usury violates first and foremost the order of nature, in effect, the balance of nature as he defined it. For this reason, I think it is fair to say that in his later writings Thomas centers the dislocation of usury more in the realm of *physics* than in the ethics of commutative justice.

There is no denying the success and influence of Thomas’ definitional “solution” here, placing impersonal nature as the arbiter of usury. It remained viable for centuries, particularly among his fellow Dominicans. My point is that there is also no denying what Thomas was forced to give up in formulating this position: the rich insights into the nature of money and exchange he had learned from Aristotle; the recognitions he had inherited from canon law that exchange was

⁹⁷ Thomas’ “nature,” as it finds expression here and elsewhere in his thought, is an abstraction whose imaginative construction is deeply indebted to Aristotle’s writings on the subject.

⁹⁸ *De malo*, q.13, art. 4, resp. “[usura] nec ideo est peccatum quia est prohibitum, set potius est prohibitum quia est secundum se peccatum: est enim contra iustitiam naturalem.”

⁹⁹ *ST*, II, II, 78, 1, resp. “usus autem pecunie ut dictum est, non est aliud quam eius substantia, unde vendit id quod non est vel vendit idem bis, ipsam scilicet pecuniam cuius est consumptio eius, et hoc est manifeste contra rationem iustitiae naturalis”

embedded in multiform contexts in which the play of probabilities, doubts, and risks necessitated approximative and proportionalized solutions and vitiated expectations for numerical exactitude in the return; and most pointedly, the moral, ethical, and social arguments against usury that had informed its condemnation from the time of Gratian.

But Thomas' was only one solution, only one moment in the history of *aequalitas* and balance. Very soon, as it happened, in the vibrant intellectual culture of late-thirteenth century scholasticism, it was followed by other solutions, rooted in other visions of equality and equalization, other "senses" of the potentialities of balance in nature, that proved to be very different from Thomas'. In the field of medieval economic thought, we can see a strikingly new model of equalization emerging in the last quarter of the thirteenth century, most directly and forcefully in the writings of the Franciscan theologian Peter of John Olivi (c.1248-1298).

Equality, Equalization, and Equilibrium in the Writings on Usury of Peter of John Olivi

The core of Peter Olivi's economic writings are found in a single work: *The Treatise on Buying and Selling, on Usury, and on Restitutions* (*Tractatus de emptionibus et venditionibus, de usuris, de restitutionibus*).¹⁰⁰ In his responses to questions attached

¹⁰⁰ This is the name chosen by Giacomo Todeschini, *Un trattato di economia politica francescano: il "De emptionibus et venditionibus, de usuris, de restitutionibus" di Pietro di Giovanni Olivi* (Rome, 1980) [hereafter *Tractatus*]. Todeschini's was the first complete edition of this work (and the first edition of the section "*De usuris*"), and it, along with Todeschini's introduction, remains the best source for Olivi's thinking on economic questions. Todeschini preceded his edition with a series of articles that have provided the basis for the analysis of Olivi and Franciscan economics up to the present time. See his "'Oeconomica francescana". *Proposte di una nuova lettura delle fonti dell'etica economica medievale*," *Rivista di storia e letteratura religiosa* 12 (1976), 15-77; idem, "'Oeconomica francescana" II: Pietro di Giovanni Olivi come fonte per la storia dell'etica-economica medievale," *Rivista di storia e letteratura religiosa* 13 (1977), 461-94.

to risk and doubt, and in his acceptance of approximation, common estimation, probabilistic reasoning, proportionalization, and above all, the dynamic factor of multiplication, he stretched the boundaries of *aequalitas* and the model of equalization past anything we have seen so far. Indeed, I want to argue that the word “equilibrium,” with its modern connotations of systematic self-regulation and self-ordering, can for the first time in the history of scholastic economic thought be applied to Olivi’s understanding of exchange *aequalitas* – including the *aequalitas* required in contracts of loan.

It is true that in constructing his arguments concerning usury and economic exchange in the *Tractatus*, Olivi makes use of a number of decisions that had evolved within both Roman and canon law over the course of the thirteenth century; reflections of opinions offered by Hostiensis, Innocent IV and other legists are clearly visible in his writings. But it is essential to recognize that Olivi wrote as a theologian, not as a lawyer. As a theologian, Olivi is most concerned with the question of whether the economic activities of men and the economic contracts they devise can (or cannot) be integrated into a governing reason or *ratio* consistent with God’s plan for mankind. Where the lawyers proceeded case by case, guided by authoritative precedents, Olivi’s thinking reflects both his imagination of an overarching *ratio* and his confidence that much of the economic behavior he observes can be viewed as belonging within and to that rational whole. Only on this

In addition to the *Tractatus*, Olivi wrote two quodlibetal questions on the subject of usury, which confirm and on some points expand his economic positions in the *Tractatus*. For the standard edition of these questions, with introduction, see Amleto Spicciati, “Gli Scritti sul capitale e sull’interesse di Fra Pietro di Giovanni Olivi: Fonti per la storia del pensiero economico medioevale,” *Studi francescani* 73 (1976), 289-325. A new Latin edition and French translation of Olivi’s complete treatise appeared too late for me to utilize it in my discussion of Olivi’s economic thought: *Pierre de Jean Olivi, Traité des contrats*, Sylvain Piron (ed. and trans.) (Paris, 2012).

basis, only on the basis of its conformity to an overarching rationality as he came to imagine it, could he justify such activity.¹⁰¹

As strange as it might appear to the modern reader, at the same time that he was expanding the bounds of *aequalitas* beyond anything previously imagined, Olivi continued to condemn usury and the inequality he located at its core in the strongest possible terms. In the introduction to his treatment of usury in the *Tractatus*, he offers nine separate arguments against it, drawn from traditional biblical, legal, theological, and philosophical sources. He asserts that it violates the justice required by both divine law and “natural equity”; that it poses the greatest threat to the social bonds of community; that it corrupts the usurer as it corrupts the ties of friendship; that it is a sin against grace and charity; that it leads (as “experience teaches”) to the “total devouring” of the wealth of others; and yet other reasons besides.¹⁰² In short, he claims: “It is not possible to demand anything more in return (“*ultra sortem*”) without violating both equity and equality.”¹⁰³ His identification of usury as a violation of the requirement for equivalence in exchange could not be clearer.

¹⁰¹ Amleto Spicciani, “Pietro di Giovanni Olivi: Indigatore della razionalità economica medioevale,” in *Usure, compere e vendite. La scienza economica del XIII secolo, Pietro di Giovanni Olivi*, Amleto Spicciani, P. Vian, and G. Andenna (eds.) (Milan: 1998), 21-72. This volume also contains Spicciani’s Italian translation of Olivi’s *Tractatus*.

¹⁰² The diatribe *contra usuram* goes on for pages (*Tractatus*, 70-77), making use of traditional arguments, including the canons cited by Gratian in the *Decretum*, decisions from the *Decretales Gregorii IX*, a partial use of Thomas’ argument from the *ST*, and Aristotle’s position condemning usury from Book I of the *Politics*.

¹⁰³ Olivi, *Tractatus*, 70-71: “*Equitas enim est quod pro equali non exigatur plus quam equivalens, seu equale. Non potest amplius exigi absque aperta lesura equitatis et equalitatis.*” For the position that the innovation of Olivi’s economic thought has been overestimated (by Todeschini and others), that Olivi’s treatment of usury was both more fragmentary and “traditional” than not, and that it leaned heavily on the canon law tradition, see Julius Kirshner and Kimberly Lo Prete, “Peter John Olivi’s Treatises on Contracts of Sale, Usury and Restitution: Minorite Economics or Minor Works?,” *Quaderni fiorentini* 13 (1984), 233-86. I think it fair to say that while it is helpful to underscore Olivi’s debt to canon law (particularly to the writings of Hostiensis), scholarship over the past quarter century generally supports Todeschini’s position with respect to Olivi’s originality and importance. The debate has been a productive one.

Moreover, Olivi extended the charge of usury beyond the simple loan contract to cover all agreements that include within them some form of unjust (i.e. unequal) lending, as he defined it. Olivi's restatement of the most traditional objections and rigorist claims in the midst of his expansive reimagining of the potentialities of equalization, reveals with exceptional clarity the tensions and pressures attached to the question of equality in this period and the high stakes involved in its shifting determination.

Equilibrium and the Ideal of the Common Good in Olivi's Thought

One matrix for the re-imagining of *aequalitas* by Olivi and others over the course of the thirteenth century is a concept that grew to occupy a place of immense importance within medieval thought in this period: the concept of the Common Good (*bonum commune*). As he writes in the *Tractatus*:

According to the order of law, justice, and Christian charity (*caritatis*), the common good (*commune bonum*) is preferred and ought to be preferred to any private good.¹⁰⁴

Notable here is the divine sanction Olivi allows to the Common Good. In his view, it conforms not only to the order of civic law and justice but equally so to the "order" of Christian *caritas*, the highest religious value and virtue.¹⁰⁵ It reminds us

¹⁰⁴ Olivi, *Tractatus*, 51: "Item secundum ordinem iuris et iustitie et caritatis commune bonum prefertur et preferri debet bono privato"

¹⁰⁵ For an early appreciation of the importance of the Common Good to Olivi's analysis of economic activity, see Todeschini, "Un trattato di economia politica francescana," esp. 12-20. Todeschini speaks here (31) of "A subtle play of relation" in Olivi's thought, "between *valor, pretium, bonum commune, caritas e lucrum*. . . ." See also, idem, *Franciscan Wealth: From Voluntary Poverty to Market Society*. Donatella Melucci (trans.) (Saint Bonaventure, NY, 2009), 112-16. Kirshner and Lo Prete, who find a number of

that this treatise was written by a man who identified himself, above all, as a Christian and a Christian thinker. His concern as a deeply committed Franciscan friar and as a confessor and teacher of future confessors, must be for the souls of buyers and sellers, not merely for the comprehension and justification of their economic actions. His redefinition of justice and equality must have an ethical and religious basis, not merely a practical or purely intellectual one. That it does, that he is able to identify common economic practices with the Common Good, and to identify the order of the Common Good with the order of both *justitia* and *caritas*, is testament to the scope, power, and influence this ideal had come to possess by the last quarter of the thirteenth century.

The ever-increasing importance allowed to the *bonum commune* over the course of the thirteenth century was closely tied to the rapid advance of urbanization, communication, commercialization, administration, and political organization that occurred over this same period. The strength of this ideal draws, in part, from the idea, emphasized by Aristotle in the *Politics*, that life within a political community is essential not only for human survival but for the perfection of human virtue. With remarkable unanimity, medieval Christian thinkers gave their assent to this assertion. So central does this concept become after the mid-thirteenth century, that writers (including leading theologians like Albertus Magnus and Thomas Aquinas) offer their assent, seemingly without hesitation, to Aristotle's dictum in the *Politics* that the common good of the political community is "manifestly greater and more divine" (*melius vero et divinius*) than the private good of any single individual.¹⁰⁶ We have seen that for canon lawyers, *aequitas*, could be

points on which to disagree with Todeschini's reading, nevertheless agree on this point ("Minorite Economics?" 269-70): "A just profit can thus be retained from the exchange of goods as a result of the service a merchant performs for society."

¹⁰⁶ Aristotle, *Politics*, I, 2 [1094b8-10]. Thomas Aquinas, *ST* II, II,31,3: "The common good of the many is more divine than the personal good of an individual." I discuss attitudes toward the Common Good in greater detail in chapters 5, 6, and 7 below, with respect

identified with God himself (*aequitas est nihil aliud quam Deus*).¹⁰⁷ So too, theologians from the mid-thirteenth century forward found it possible to identify the good of the whole community, the Common Good, with the order and governance of the universe itself, and thus, *per similitudinem*, with God.¹⁰⁸ It is an extraordinary claim, and it had extraordinary repercussions, not least within the intellectual sphere.

As its name implies, the Common Good represents an aggregate whole -- the sum of its moving, acting, and interacting parts, which in this case are the citizens of the civitas. In its essence, it privileges the aggregate over the individual, the whole over the part. In the words of St. Thomas (writing approximately two decades before Olivi composed the *Tractatus*): "a particular good is ordered to the common good as to an end; indeed, the being of a part depends on the being of the whole (*esse enim partis est propter esse totius*)."¹⁰⁹ To "think with" the Common Good, which became ever more common in the fields of political and economic thought after the

to equality and equilibrium in medieval political thought. Chapter 5 deals specifically with the place of this ideal in the thought of Albertus Magnus and Thomas Aquinas.

¹⁰⁷ Gouron, "Some Aspects," 164; Grossi, *L'Ordine giuridico*, 211.

¹⁰⁸ Saint Thomas Aquinas, *Summa Contra Gentiles*, C. Pera (ed.) (Turin, 1961) based on the earlier Leonine edition [henceforth, SCG], Book III, Vernon J. Bourke (trans.) (New York, 1955-57), III, 17, 6: "Furthermore, a particular good is ordered to the common good as to an end; indeed, the being of a part depends on the being of the whole. So, also, the good of a nation is more divine than the good of one man. Now, the highest good which is God is the common good, since the good of all things taken together depends on Him." For the explicit linking of the Common Good of the political community to the divine, see Remigio Girolami, *De bono communi*, L. Minio-Paluello (ed.), "Remigio Girolami's *De bono communi*," *Italian Studies* 11 (1956), 56-71.

¹⁰⁹ Thomas Aquinas, SCG III, 17; idem, *ST*, I,II,90,3 ad 3: "And therefore, as the good of one man is not the last end, but is ordained to the common good; so too the good of one household is ordained to the good of the civitas, which is a perfect community." There are very many quotations from the works of Thomas that could be used to illustrate the power of the ideal of the Common Good and its multifarious applications. I have chosen to use his words to indicate its contours because of his extraordinary sensitivity to the logical implications of the terms he employs and his capacity to give intellectual shape to concepts of this magnitude.

mid-thirteenth century, meant to think in terms of aggregates and multiples. It meant learning to imagine and comprehend the workings of composite communities, whether the *civitas* or the multitude of exchangers in the marketplace, composed of myriad individual parts ordered within a larger functioning system. It raised new questions: how do composite communities act, how do they find direction, how do they arrive at decisions and judgments, how are they ordered and regulated, how might they order and regulate themselves? From the mid-thirteenth century on, each of these questions directed toward the communal whole continued to center on the notion of *aequalitas* and its requirements, just as they had in earlier times when they were directed toward the actions and judgments of individuals. But since the new object of investigation was a systematic unity rather than an individual, new questions were added: how does the unity hold together, how do its parts *fit* together and *function* together, how do the parts *relate* to the whole, how does the system order and equalize *itself* in the absence of direction from outside or above; in short, how does it *work*?

By the last quarter of the thirteenth century, the act of reasoning or calculating in terms of the maintenance of *aequalitas* within this functioning unity came to entail imagining a fundamentally new principle of order, based on a new *sense* of the potentialities of balance, which closely approaches the modern connotation of the term “systematic equilibrium.” The meaning of the word “equilibrium” did not change in this period. It continued to be applied to two perfectly equal weights balanced at a single achievable point, on the model of the mechanical scale, as it had for millennia past. What changed was the unworded sense of what balance was and could be when expanded past the individual to the systematic whole. It is this unworded sense of balance to which the modern connotations of the word equilibrium apply: a sense of multiple moving and intersecting parts, capable of continually re-ordering and re-equalizing *themselves* through their intersections and interactions, and doing so around approximative ranges or “latitudes” rather than

around perfectly knowable points. Rather than the 1: 1 arithmetical equalization required by Gratian's canons, or even the neat bisection of the line of gain and loss that Aristotle associated with *justitia directiva*, the new sense of balance/equilibrium, to which old word *aequalitas* continued to be applied, was grounded in proportions that were understood to shift constantly in relation to shifting contexts and conditions. As Olivi's writings will show, the goal of equalization could now incorporate notions of probability, but it could only do so by abandoning requirements for fixity and certainty. And yet Olivi found it possible to equate this new and newly dynamic form of *aequalitas* with the maintenance of the Common Good.

In short, the evolving ideal of the Common Good was pressured and shaped by the same factors that shaped the expansion of *aequalitas* over the course of the thirteenth century. But where the elements and assumptions constituting *aequalitas* remained for the most part unarticulated and beneath the level of debate, conceptions of the Common Good were continually re-articulated and expanded upon. As the concept continued to evolve and to strengthen, the immense and far reaching discourse on the "good" in both the Christian and Aristotelian traditions came ever more to be viewed through its lens. In many cases, acts, habits, laws, virtues, and subordinate ideals were reconceived and re-ordered to the evolving requirements of this great and growing ideal. As Thomas writes: "A law properly speaking, regards first and foremost the order to the common good."¹¹⁰ And again, "There is no virtue whose act is not ordainable to the common good, either mediately or immediately."¹¹¹ In short, when the ideal of the Common Good, with its particular logic, values, and forms of analysis, was superimposed on questions that had long been asked within scholastic culture, the effects were often profound and transformative. So it was with the question of usury.

¹¹⁰ *ST I,II 90, art. 3.*

¹¹¹ *ST I,II,96,3, ad 3.*

Olivi and the Franciscan Order

Deep links between the Franciscan Order, the commercial classes of the towns, and the ideal of the Common Good were established generations before Olivi wrote his *Tractatus* on contracts. Franciscans lived among townspeople, preached to them, received alms from them, frequently drew their members from among them, and often were called upon to confess them. All of these factors linked the Franciscans to the life of the city and encouraged brothers to observe the details of town and commercial life with care. The many years Olivi spent in urban environments were typical in this respect. Born in Southern France in the diocese of Béziers (1248), he entered the Franciscan Order at the relatively young age of twelve, where he received his early education.¹¹² At eighteen (1266) he was sent to the great urban center of Paris to study theology. He remained a student at Paris for at least six (and perhaps as many as eight¹¹³) of his formative years, after which he returned to Southern France. He spent the later 1270's and early 1280's teaching in Franciscan convents within the expanding and economically precocious towns of Narbonne and Montpellier.¹¹⁴ Both were centers of commerce in this period; both were at or approaching their commercial and demographic zenith in these last decades of the thirteenth century.¹¹⁵ In 1283, while teaching in the Franciscan convent in

¹¹² For the biography of Olivi, see David Burr, "The Persecution of Peter Olivi," *Transactions of the American Philosophical Society*, 66, no. 5 (1976), 1-98; idem., *Olivi and Franciscan Poverty: The Origins of the Usus Pauper Controversy* (Philadelphia, 1989). Additional details are provided in Sylvain Piron, "Marchands et confesseurs. Le Traité des contrats d'Olivi dans son context (Narbonne, fin XIIIe-début XIVe siècle)," in *L'argent au Moyen Age* (Paris, 1998), 289-308.

¹¹³ This is the conjecture of Sylvain Piron, "The Formation of Olivi's Intellectual Project," *Oliviana* 1 (2003).

¹¹⁴ Burr, "Persecution," 6 and n. 10.

¹¹⁵ See Kathryn Reyerson, *Business, Banking and Finance in Medieval Montpellier* (Toronto, 1985), 115; Jacqueline Caille, "Urban Expansion in the Region of Languedoc from the

Montpellier, certain of Olivi's theological positions were condemned by a commission of scholars from Paris, and his status within the Order was seriously compromised. After several years of contesting the charges, however, he succeeded in defending himself and his writings, and by 1287 he was back in good graces. At this point he was appointed to teach at the important Franciscan school at Santa Croce in the great commercial capital of Florence, where he remained for two years. After 1289, he was back again at the Franciscan *studium* in Montpellier, which had close contact with the university of Montpellier and its renowned medical school. In these years he very likely came into contact with the eminent scholastic physician and medical author, Arnau de Villanova.¹¹⁶ Olivi wrote his *Tractatus* in the middle 1290's while teaching either at Montpellier or Narbonne.¹¹⁷ One thing is clear: whether at Paris, Florence, Narbonne, or Montpellier, Olivi spent his entire life in cities that were undergoing rapid expansion, both demographically and commercially.

In every page of his *Tractatus*, Olivi demonstrates his acute awareness of the commercial and contractual life that surrounded him. His sensitivity to contractual forms may well be linked to the vibrant notarial cultures that pervaded the cities he inhabited, Florence, Narbonne, and Montpellier, in particular. These civic spaces were characterized by the habit of organizing the minute details of economic life into contract form.¹¹⁸ But the depth of Olivi's contractual awareness raises a series

Eleventh to the Fourteenth Century: The Example of Narbonne and Montpellier," in *Urban and Rural Communities in Medieval France: Provence and Languedoc, 1000-1500*, Kathryn Reyerson and J. Drendell (eds.) (Leiden, 1998), 51-72. I discuss the commercial setting of Montpellier further in Chapter 4, with reference to the contemporary residence there of Arnau de Villanova, who made great contributions to the intellectual shaping of the new model of equilibrium from the direction of medical theory.

¹¹⁶ I discuss the intellectual links between Olivi and Arnau (and between economic thought and medical thought) further in Chapter 4 below.

¹¹⁷ Piron, "Marchands et Confesseurs," 291-92, has suggested the dates 1293-95.

¹¹⁸ On notaries in Montpellier in this period, see Kathryn Reyerson, *The Art of the Deal: Intermediaries of Trade in Medieval Montpellier* (Leiden, 2002), 79-83. For the focus on

of questions that cannot, I think, be explained by his urban setting alone. How did it happen that this rigorist Franciscan theologian, committed to the ideal of evangelical perfection, sworn to a strict vow of poverty, convinced that the preoccupation with temporal affairs and the distractions of the senses was the primary path toward sin and error, possessed at the same time such a capacious understanding of mercantile contracts and practices, and such a capacious willingness to judge existent practices favorably as legitimate forms of equalization?¹¹⁹ One answer surely lies in his unhesitating recognition that commerce and the commercial classes that pursued it, served the Common Good.

Problems Attached to *Aequalitas* in the Loan Contract

In the long history of scholastic economic thought, the analysis of usury was considerably more cautious, strict, and ideal-driven than the analysis of price and value in buying and selling. We can see this division reflected in Olivi's *Tractatus*. Where the section *De emptionibus et venditionibus* begins with the enunciation of principles of huge scope and implication (discussed in Chapter 2 below), the section *De usuris*, begins much more cautiously and derivatively with a series of arguments

contractual specificity, see *Medieval Notaries and Their Acts : The 1327-1328 Register of Jean Holanie*, Kathryn Reyerson and Debra A. Salata (eds. and trans.) (Kalamazoo, Mich., 2004).

¹¹⁹ For Olivi's leadership in the Franciscan's debate over the question of poverty, see Burr, *Olivi and Franciscan Poverty*, esp. 57-80. Despite his rigorist position, Olivi recognized that the degree of poverty embraced by each of the brothers must be determined relative to the needs and capacity of each, which he understood to vary. It is noteworthy that to express this sense of relativism and latitudinarianism in spiritual matters, he used the identical word to signal the idea of proper and relative fit, *idoneitas*, that he used with respect to similar concerns in economic matters. On this point, and on the linkage between spiritual and economic vocabularies in Olivi's writings, see Todeschini "Oeconomica francescana" II, 491ff; idem, "Olivi e Il Mercator Cristiano," in *Pierre de Jean Olivi (1248-1298). Pensée scolastique, dissidence spirituelle et société*, Alain Boureau and Sylvain Piron (eds.) (Paris, 1999), 217-37; idem., *Franciscan Wealth*, 96-103.

against usury drawn from the past.¹²⁰ Clearly, Olivi intends to establish from the beginning that whatever he might say concerning equalization in the loan contract, his starting point is the principle that usury -- the demanding of anything in return beyond the sum lent -- is in itself (*in se*) a sin against both divine and natural *aequalitas*.¹²¹ As he writes: "It is not possible to demand more in return (than the sum lent) without breaching both equity and equality."¹²² After dedicating page after page to these traditional arguments, Olivi suddenly halts and suggests that with all the certainty attached to its sinfulness and illegality, there are still a number of doubts (*dubia*) pertaining to the question of usury. Over the concluding pages of the section on usury in the *Tractatus*, he considers seven of these doubts.¹²³ All of the seven *dubia* focus on the strict requirement for equality in the loan contract; all make use of concrete examples from commercial life to illustrate the problems and questions associated with this strict requirement; and in response, all expand *aequalitas* in the direction of equilibrium. I consider here the two I judge to be particularly revealing of Olivi's attitudes.

In *dubium* five, Olivi asks whether and to what extent contracts involving doubt concerning an unknown and unknowable future might affect the rules governing equality. We have seen this question raised earlier in canon law, and we have seen the difficulties presented by the introduction of future risk and doubt to the determination of a licit *aequalitas* in contracts of loan. Olivi is not so much breaking new ground here as providing both a general framework and an approximative mathematical scheme that can be applied to the problem. He asks whether a right to possession in the future can be bought for a price less than the

¹²⁰ Olivi, *Tractatus*, 69-77.

¹²¹ Olivi, *Tractatus*, 68: "Dicendum quod mutuo seu propter mutuum recipere aliquid plus vel prevalens, est contra ius divinum et naturale."

¹²² Olivi, *Tractatus*, 71-72: "Non potest amplius exigi absque aperta lesura equitatis et equalitatis."

¹²³ Olivi, *Tractatus*, 77-88.

thing itself would command at present.¹²⁴ He not only declares that it can, but he imposes a rough mathematical scale on the differences permitted. “To the extent,” he writes, “that a future right to possession extends further into the future, it can, all things being equal (*ceteris paribus*), be bought for a [proportionally] lower price.”¹²⁵ He adds to this the general rule:

The right to receive a thing that is actually present, and the actual possession itself, is worth more, all things being equal (*ceteris paribus*), than either the right to receive something in the future or the right alone without actual possession.¹²⁶

He then broadens the principle yet further: “The certitude of actual possession is worth more than the certitude of possession in the future.”¹²⁷ Based on these general principles, which are in turn grounded in his recognition that varying degrees of probability can be contractually expressed by proportionately varying prices, he concludes that when it is a right (*ius*) to receive something in the future

¹²⁴ Olivi, *Tractatus*, 83: “Quintum ex predictis patens est quod ius futuri etc.” The distinction he makes here between the possession of a thing and the possession of a right (*ius*) to the thing was developed in the canon law tradition justifying the census contract before Olivi wrote the *Tractatus*. It proved to be an important conceptual tool in dealing with questions involving future doubt and risk, and it was expanded by writers on economic questions both before and after Olivi.

¹²⁵ Olivi, *Tractatus*, 83: “quanto ius futurorum procedit in longinquiora futura, tanto ceteris paribus potest minori pretio emi.”

¹²⁶ Olivi, *Tractatus*, 83: “Constat autem quod ius et naturalis possessio rei presentis plus valet ceteris paribus, quam solum ius rei future, aut quam solum ius absque actuali possessione non statim tradita vel tradenda.”

¹²⁷ Olivi, *Tractatus*, 83: “Certitudo autem rei presentis et presentialis possessionis eius maior et prestancior est quam certitudo rei future possessionis aut quam certitudo future possessionis rei presentis . . .” Cf. Piron, “Le traitement de l’incertitude,” 83-85.

that is being bought and sold, it is permissible to buy it for less than its present value would command.¹²⁸

He concludes, in sum, that when doubt and risk intervene in contracts involving some form of credit, it is permissible to violate the requirement of strict arithmetical equality and to substitute instead a sliding scale of equalization, proportioned to the length of intervening time the credit-sum would be at risk, compounded by the degree of uncertainty and probability involved in the contract. *Aequalitas* here is the estimative product of intersecting sliding scales. In order to arrive at this solution, Olivi had to overcome traditional scholastic objections (strongly voiced within the traditional discourse on usury) to the selling of time. In traditional theory, time was common to all things in creation and possessed by no one except God. To sell time (as one does when one charges a borrower for the time he possesses the money lent, or the time he takes to pay back the loan, or the time difference between payment and receipt), is to sell what one does not possess and is not one's to sell, creating the injustice and inequality that constitutes the sin of usury. Olivi countered this objection (in a previous *dubium*), by arguing for a crucial (and bold) distinction between common time, which can never be sold, and "specific time" which is attached to specific contracts and specific elements of economic exchange involving future return.¹²⁹

Envisioning the Equalization of the Probable and the Open Ended:

Commercial Capitale

¹²⁸ Olivi, *Dubium 3, Tractatus*, 81-83. See also his determination (*Tractatus*, 84) that since it is more certain that money lent to the city will be repaid with interest than that profit will accrue from actual trade, the indemnification owed by the city should be proportionally discounted with respect to the sum lent: "Idcirco tamen debet sibi de probabili lucro subtrahi, quantum prefata certitudo preponderat incertitudini et periculo, quod circa capitale et lucrum potest in mercationibus."

¹²⁹ On the break with tradition that this reasoning represents, see Kirshner and Lo Prete, "Minorite Economics," 262-66.

Olivi's *dubium* six is his most powerful and includes his most potentially destabilizing arguments. From the time that it was first edited by Todeschini, it has rightfully occupied a central place in the history of usury theory. It contains two major parts. The first asks the question whether loans that are forced upon the lender (e.g., loans that the *civitas* demands from its citizens on behalf of the Common Good), can legitimately require and receive "interesse" added to the value of the loan itself.¹³⁰ Olivi answers in the affirmative: no matter why the lender was forced to loan by the city, he has the right to require an indemnity, but only on the condition that he has suffered actual financial loss from the loss of the *use* of his money, that is, only if he would otherwise have put the money he lent to productive and profitable use. In that case, the lender may justly demand *the equivalent of the profit he would likely have gained*, had he retained the use of his money.¹³¹ How can Olivi say this? If money is presumed to be sterile, not lucrative in itself (*ex se sola non est lucrosa*), incapable of generating more of itself by itself, which had long been a primary precept of medieval economic thought, then how can Olivi argue that the sum lent, whether from the threat of violence or from any other cause, *requires* an indemnification *ultra sortem* simply to maintain equality in the contract, and,

¹³⁰ This and related questions pertaining to forced loans and the administration of municipal debt continued to be asked and answered with great sophistication throughout the fourteenth century. The plethora of answers has given rise to a number of important studies. On the history of this discussion, see Julius Kirshner, "Storm over the Monte Comune: Genesis of the Moral Controversy over the Public Debt of Florence," *Archivum Fratrum Praedicatorum*, 53 (1983), 219-76; idem., "Ubi est ille?" Franco Sacchetti on the Monte Comune of Florence," *Speculum* 59 (1984), 556-84; Lawrin Armstrong, "The Politics of Usury in Trecento Florence: The *Questio de monte* of Francesco da Empoli," *Mediaeval Studies* 61 (1999), 1-44; idem., *Usury and Public Debt in Early Renaissance Florence: Lorenzo Ridolfi on the Monte Comune* (Toronto, 2003), esp. 28-84; John Munro, "The Medieval Origins of the Financial Revolution: Usury, Rentes, and Negotiability," *The International History Review* 25 (2003), 505-62, at 511-18.

¹³¹ Olivi, *Tractatus*, 84: "Et ideo eo ipso quod potest iuste exigere interesse damni, potest iuste exigere equivalens damnificationis talis lucri"

moreover, an indemnification “equivalent” to the *probable profit* the money would likely have earned?

He can make this claim because he has come to a realization that is startling in its implications: all money is not equal.¹³² It exists in two forms, and each requires its own form of equalization. On the one hand, there is money as it had been traditionally identified, as it had appeared in Gratian’s canons, as it had received clear definition in Aristotle’s discussion in *Ethics V*, and as Thomas reaffirmed in his questions on usury. Here money (*pecunia numerata*) is the numbered measure and commensurating medium of all goods in exchange. In this form (which Olivi frequently designates as “simple money”) it is and must remain fixed in order to perform its proper functions of commensuration and equalization.¹³³ As *pecunia numerata*, money falls under all the traditional restrictions of usury theory: to demand, accept, or desire anything *ultra sortem* for its loan is to create an insupportable inequality and to commit the sin of usury.

The second form that money takes, according to Olivi, is money as commercial investment, employed by merchants for the expressed purpose of gaining profit through trade. He himself gives this second form the name “capital” (*capitale*), and he outlines the essential ways in which it differs from “simple” money. Where *pecunia numerata* is fixed and (ideally) stable, *capitale* is, in essence, fruitful, expansive, and multiplicative. He writes:

The reason why [money of a certain kind] can be bought or exchanged for a price [more than itself] is because . . . money which in the firm intent of its owner is directed toward the production of probable profit

¹³² Kirshner, who questions the originality of Olivi on many points, recognizes, nevertheless, the “significant departure from tradition” represented by Olivi’s definition of *capitale* and its consequences in his thought. On this see Kirshner and Lo Prete, “Minorite Economics,” 262-74, at 266.

¹³³ E.g., Olivi, *Tractatus*, 85: “habet rationem simplicis pecunie.”

(*ad aliquod probabile lucrum*) possesses not only the qualities of money in its simple sense but beyond this a kind of seminal cause of profit within itself (*quamdam seminalem rationem lucrosi*), which we commonly call “capital.” And therefore it possesses not only its simple numerical value as money/measure but it possesses in addition a superadded value (*valor superadiunctus*).¹³⁴

Olivi is clear to emphasize, here and elsewhere, that money *per se* cannot be the cause of its potential for expansion and multiplication. Rather, capital is money that has “taken on” (*assumit*) its quality of fruitfulness and its multiplicative power.¹³⁵ The accumulative source of power in capital is the “industry” of the merchant (*ad lucra per mercationum industriam cumulanda*).¹³⁶ Money as capital literally “retains” (*retentor*) the profitable industry of the merchant. It is the merchant who, through his activity (an activity that Olivi everywhere defines as beneficial to the Common Good), fructifies money and transforms it into capital.

Olivi’s conception of the merchant’s *industria* -- that which transforms simple money into productive capital -- is remarkably capacious. It comprehends a host of qualities that grow out of the merchant’s hard earned professional knowledge. It includes his skill in judging the value of commodities, his grasp of different moneys and markets that permits him to know where goods can be bought for less and sold for more, his care in managing his affairs, and his courage in facing the risks

¹³⁴ Olivi, *Tractatus*, 85: “Causa autem quare sub tali pretio potest illud vendere vel commutare est . . . quia illud quod in firmo proposito domini sui est ordinatum ad aliquod probabile lucrum non solum habet rationem simplicis pecunie seu rei, sed ultra hoc quamdam seminalem rationem lucrosi quam communiter capitale vocamus, et ideo non solum habet reddi simpliciter valor ipsius sed etiam valor superadiunctus.” On this, see Franklin, *Science of Conjecture*, who notes (265): “What is especially original in Olivi is his use of the concept of the probable.”

¹³⁵ Olivi, *Quodlibet* I, q. 17, Spicciani, “Gli scritti,” 319-20.

¹³⁶ Olivi, *Quodlibet* I, q. 16, Spicciani, “Gli scritti,” 317.

associated with commerce. I will consider these qualities and their role in the legitimization of mercantile profits in the chapter that follows. Here I want only to look at the assumptions that underlie a reevaluation of this magnitude. At the forefront of these stands the weight Olivi allows to probability and his attempt to integrate probability into a mathematics of equalization.

As we have seen, the merchant who loses the use of his money by virtue of being forced to lend it, is, according to Olivi, permitted to charge an indemnity “equivalent” to the “probable profit” he would have made had he retained the use of his money. In *dubium 6*, Olivi provides additional guidelines for integrating exchange probabilities into a mathematics of proportional equalization. For example, a merchant who, out of “special” grace and charity sells his wheat soon after harvest when the community values it less (*communiter minus valet*), rather than holding off its sale, as he had intended to do, for a time when the price would most “probably” be greater (*probabiliter magis caro*), is allowed to request the price that the future sale would “probably” (*probabiliter*) have brought.¹³⁷ Olivi then concludes *dubium 6* with a general statement of his expanded vision of *aequalitas* (and hence of liceity) in the loan contract. The case he presents is of someone who is firmly determined to invest his money in profitable trade but who instead lends it to another in need, solely out of piety and concern for the other’s condition. May this person require a return on his loan *ultra sortem* without committing usury? Olivi’s answer is yes: the lender may require of the borrower an additional sum in return, equivalent to the lost probable profit that the lender would likely have earned on his money, had he invested it in commerce rather than loaned it.¹³⁸ And he may stipulate this as an integral part of the contract itself at the time of its formulation.

¹³⁷ Olivi, *Tractatus*, 84.

¹³⁸ Olivi, *Tractatus*, 85: “Item ex hoc patet quod quando aliquis pecuniam de qua firmiter mercari proponitur, prestat alicui ex sola pietate et necessitate illius, sub tali pacto quod quantum consimilis summa apud talem equivalentem mercatorem

Almost all the cases Olivi offers in *dubia* 5 and 6 reflect questions that had been debated within the canon law on usury for a generation and more before he wrote the *Tractatus*, including the question: should the lender who could have invested his money in commerce at a probable profit be indemnified for the loss of this profit. As we have already seen, the influential legal scholar Hostiensis, writing toward the middle of the thirteenth century, generally accepted the right to such an indemnification under a form of *interesse* entitled *lucrum cessans*. But despite Cardinal Hostiensis' authority and his excellent standing within the Church, the matter was far from decided. St. Thomas, for one, refused to allow probability the ontological status conferred on it by Hostiensis and Olivi. He denied the legitimacy of *lucrum cessans* by making a strict distinction between what was "merely probable" (the profit expected from investment) and what was real (the actual sum lent).¹³⁹

lucrabitur vel perdet, tantum ipse lucretur vel perdat, non committit usuram, sed potius facit aliquam gratiam salva tamen sua indemnitate." Olivi takes up a similar case again in *Quodlibet* I, 17 (Spicciati, "Gli scritti," 320), and here he openly declares that when merchants make such loans, even when they require indemnity *ultra sortem* for their lost profit, they are still being "immensely helpful to friends," and are performing "works of piety and equity" (*opus pietatis simul et aequitatis*). Note that the right to indemnification for lost probable profit extends only to those who had a previous "firm intent" to invest their money in commerce, and, as Olivi also specifies, to those who possessed the knowledge to do so and the habit of doing so. In short, it extends only to those merchant servants of the Common Good who are habitually engaged in commerce but are not habitual lenders. For these merchants, traditional strictures against demanding any "excess" *ultra sortem* has, as Todeschini points out in many places, effectively disappeared.

¹³⁹ *ST*, II,II, 78, 2, ad 1: "he [the lender] must not sell that which he has not yet, and may be prevented in many ways from having." There are writers on economic questions, after Thomas, who continue to support this position, and others who cite it authoritatively yet alter it in interesting ways. See, for example, Gregory of Rimini's position in *Tractatus subtilissimi doctoris Gregorii de Arimino: De Imprestantiis Venetorum. Et de Usura* (Regii Aemiliae, 1508), Article 4, n.p. Here Gregory confirms Thomas' argument and cites him directly on this point. As he goes on, however, he recognizes that some proportion between real loss and merely possible loss exists and can be determined, with the implication being that a discounted value can be assigned to merely possible loss: "quia minus est habere aliquid in virtute quam habere actu: tamen

After Hostiensis, the question continued to be debated for centuries, with scholastic economic thinkers lining up on both sides of the question, but with the majority arguing against the acceptance of *lucrum cessans*.¹⁴⁰

Olivi's full embrace of probability in *dubia* 5 and 6 clearly differs profoundly from Thomas' position. It is important, however, to recognize in what ways it also differs from the canon law position accepting *lucrum cessans* enunciated by Hostiensis.¹⁴¹ Hostiensis insisted that *lucrum cessans* be considered an "external title" to the loan, dependent on the merchant lender's request to be indemnified on demonstration of his lost profit.¹⁴² Olivi, in contrast, has normalized the probability of profit and fully integrated it into the loan contract itself. For Olivi probability is not an external or separable circumstance. Rather, in his vision, the probability of profit exists, in some real sense, as a "seminal" power *within* the capital itself, and consequently, all loans involving capital must integrate this seminal and superadded value into the requirement for equality and equalization in the exchange. Such an integration could only have been imagined following a radical revisioning of *aequalitas* itself.

Envisioning a Model of Equilibrium in Exchange

The clearest illustration of Olivi's reevaluation of probability in the *mutuum* and his attempt to apply proportional mathematics to its estimation is found in a

tenetur facere aliquam recompensationem secundum conditionem personarum et negotiorum." See also Ovidio Capitani, "Il "De peccato usure" di Remigio de Girolami," *Studi Medievali* 6 (3rd series) (1965), 537-662, at 566-67.

¹⁴⁰ On the history of this discussion, see Armstrong, *Usury and Public Debt*, 61-65; Amleto Spiccianni, *Capitale e interesse tra mercatura e povertà nei teologi e canonisti dei secoli VIII-XV* (Rome, 1990), 40-48; Munro, "Medieval Origins of the Financial Revolution," 511-12.

¹⁴¹ Kirshner and Lo Prete, "Minorite Economics," 269-74.

¹⁴² Noonan, *Usury*, 118.

separate “case” he added to the *Tractatus* several years after its initial composition.¹⁴³ The case itself is highly detailed in its consideration of commercial risk and doubt, with the convoluted logic of the decretal *Naviganti* visible in its background. But it brings Olivi to enunciate a series of principles concerning probability and equalization that are unrivaled in the medieval period for their clarity and perceptiveness. These principles enunciate virtually all the major elements constituting what I am calling the “new model of equilibrium,” a model whose evolution we have been tracing in this chapter and will continue to trace in each of the chapters that follow. They are: the assigning of an “appreciable value” to probability; the recognition of value relativity; the acceptance of determinations based on estimations and approximations; the application of graded and divisible “latitudes,” open to continual expansion and contraction, to the measurement of qualities and values; the implementation of a mathematics of proportionality; the integration of multiplication into the mathematics of equalization; the vision of a self-equalizing system in which order is attained through the dynamic intersection and interchange of parts within the whole; the expansion of the scale of ordering from the individual to the aggregate; all of which are directed toward the attainment and maintenance of balance/*aequalitas*.

In the appended *casus*, Olivi presents the clearest statement of his position that the probability of commercial profit possesses a real and “appreciable” value (*appreciabilis valor probabilitatis*) that can be estimated and measured by money price and can therefore be licitly bought and sold for that price.¹⁴⁴ Merchants, he

¹⁴³ The case was first edited by Spicciani under the title “*De contractibus usurariis: casus*,” in *Gli scritti*, 321-25. Todeschini added this text as an appendix to his edition of the *Tractatus*, 109-12. For an estimate of the date and circumstances of its composition, see Piron, “Le traitement de l’incertitude,” 21.

¹⁴⁴ Olivi, *Tractatus*, 110: “Secundum est, apreciabilis valor probabilitatis seu probabilis spei lucri, ex capitali illo per mercationes trahendi. Ex quo enim haec probabilitas habet aliquem valorem, aliquo temporali precio appetibilem potest licite illo vendi pretio.”

recognized, presuppose that superadded value “truly” (*vere*) exists within the *capitale* itself as a “cause” or “reason” or “seed” of fructifying profit, and they buy and sell it as if this were the case, without committing usury.¹⁴⁵ He also provides an answer to a fundamental question that he had previously left open: how is the price attached to probable profit to be determined? And by whom? The importance of this answer is clear: without it, the “equivalence” between buyer and seller that he repeatedly insists upon lacks the order and precision it requires. In a characteristic move, he de-centralizes judgment. Rather than assigning the responsibility for determining capital’s superadded value to any overarching authority standing outside of or above the field of exchange, he assigns it to the conjoined judgments of the individual merchant-exchangers themselves. He does so because he recognizes that the value of capital can never be determined precisely or absolutely nor can it be fixed for all times and situations. Its value can only be determined by and in the act itself of buying or selling capital, not by law or theory. It can only be a relative determination, calculated in relation to the actual and always changing circumstances of exchange. Since only the merchant borrowers themselves know how much the borrowed capital is worth to them in any given situation, only they know how much they are willing to pay for it *ultra sortem*.

In sum, Olivi recognized that merchants *lived in the world of the probable*. Through their continual experiences and experiments with commercial risk and doubt, they had learned how to *estimate* its ever-shifting value at any point in time. They had learned how to *rationaly discount the probable*, paying proportionally less as the uncertainty and doubt attached to risk increased. He writes:

¹⁴⁵ Olivi, *Tractatus*, 110: "Ergo praedictum interesse probabilis lucri, quodam modo causaliter, et quasi seminaliter continebatur in praedicto capitali: alias enim non posset licite exigi. . . . prout causaliter continentur in capitali, in quantum est capitale, idest in quantum vere et non ficte est in mercationes fiendas deputatum et destinatum; ergo hic non est peccatum usurae."

the probability of profit is sold at a lower price than the buyer [i.e., the merchant borrower] expects to make in the future from the capital he has bought it is understood that the buyer [borrower] of capital always expects to profit more from it in the future than he will pay for it.¹⁴⁶

The merchant borrower, being knowledgeable in the art of trade (*in arte mercandi et lucrandi industrius*) (as Olivi assumes), can be expected to “buy” capital for a price that is *rational*, even if it is, necessarily, an estimated price based on probabilistic reasoning. Recognizing that merchants have succeeded in integrating probability and rationality in practice, Olivi does so in theory.

Notice that throughout this *casus*, Olivi has transferred the terms of acquiring capital from a loan to a sale. In doing so, he employs the same strategy that Pope Innocent IV had earlier applied to the census contract. In both cases, the transfer permits the test of equality to be shifted from a precise balancing point to a continuous range, and from an arithmetical to a proportional equivalence.¹⁴⁷ The guarantee of equality and rationality in this type of open-ended exchange, in which hugely varying degrees of risk and probability are involved, is provided solely by the voluntary agreement of both parties to the contract.¹⁴⁸ Mutual agreement implies mutual recognition of gain, which, *in itself*, provides the necessary basis of

¹⁴⁶ Olivi, *Tractatus*, 323: “probabilitas illa minori pretio venditur quam lucrum ex mercationibus capitalis creditur suo tempore futurum et valiturum, constat quod in eius venditione semper creditur probabiliter quod emptor eius sit finaliter lucraturus seu plus quam in emendo dedit habiturus.”

¹⁴⁷ I discuss the implications of this transference in the chapter that follows.

¹⁴⁸ Olivi, *Tractatus*, 112: “Dicendum quod immo causaliter, seu aequivalenter aut praevalenter, ex ipso educitur, pro quanto scilicet futurum lucrum suarum mercationum iam quasi esse in ipso praesupponitur, et tamquam iam praesuppositum venditur et emitur; et certe, ipse emptor, cum sit in arte mercandi et lucrandi industrius et voluntarius, non emeret illud lucrum nisi bene sciret illius emptionem probabiliter esse sibi lucrosam.”

aequalitas in exchange. Clearly, no matter how knowledgeable the merchant, his calculations of future profit would prove wrong from time to time. But failure in these individual cases does not render the agreements under which they were contracted usurious in Olivi's eyes. In his search for equality, he is looking past individual exchanges to the "common" course of exchange in his society. His vision has expanded to comprehend the aggregation of myriad personal decisions that constitute the working *system* of exchange.

The Emergence of the "New" Model of Equilibrium at the End of the Thirteenth Century

Olivi's concept of *capitale* grew out of his recognition that bringing the world of commerce within the bounds of philosophical and theological rationality required the intellectual imagination of new forms of equalization. Such forms existed in the urban marketplaces of Southern France and Italy *before* they found expression in Olivi's thought. He makes this clear when he notes that the concept of productive capital was in common use (*communiter capitale vocamus*) before his decision to provide it with a philosophical rationale and to bring it within the bounds of licit equalization. I do not, however, mean to suggest that the new model of equilibrium was present in the understanding of even those merchants whose economic practice conformed to it. While the model of equilibrium envisioned by Olivi was, to my mind, indubitably the product of a particular socio-economic environment at a particular time, one that was in place in the most urbanized centers of Europe by the last quarter of the thirteenth century, it was at the same time an *intellectual product*. It was a mixture of experience, observation, and the highest intellection. It grew out of a desire to make sense of how things actually appeared to work in the urban marketplace, yes, but training in philosophy and theology provided the very ground for "making" sense. For Olivi, to make sense was to rationalize, to integrate

observations of everyday life and transcendent values into a rational and logical plan capable of meeting the stringent test of theological (not merely legal) approval.¹⁴⁹ In Olivi's case, this meant redefining the boundaries of equality so that the commercial activity of merchants, which he firmly believed contributed greatly to the Common Good, could be incorporated within that "order of law, justice, and Christian charity" it was the theologian's responsibility to define.¹⁵⁰

The great expansion of commerce in the thirteenth century, the equally great successes of the calculating merchant, and the recognition that mercantile activity, taken as a whole, served the community as a whole, led Olivi to recognize – to *seek* to recognize – the rationality of commercial exchange. There were great hurdles to overcome, given that the system of exchange was built around elements that had previously appeared inherently destabilizing and inimical to rationalization, if not sinful: the probable, the uncertain, the dynamic of multiplication, the acceptance of superadded values, the building of agreements on the sands of approximation and estimation, and not least of all, the personal search for advantage and profit, the personal desire for *unequal* gain.¹⁵¹ The task facing Olivi was to formulate new explanations, consistent with the scholastic requirements of *ratio*, *aequitas*, and *aequalitas*, that were capable of comprehending the logic of commercial activity. The end result was his vision of exchange as a supra-personal system in dynamic equilibrium.

¹⁴⁹ Spiccianni, "Pietro di Giovanni Olivi: Indigatore della razionalità economica medioevale," 21-72.

¹⁵⁰ Cf. Olivi's opening argument of the *Tractatus* (cited above) where mercantile activity is identified with the Common Good and the Common Good is identified, in turn, "secundum ordinem iuris et iustitiae et caritatis." On this linkage see Todeschini, "Olivi e il mercator Cristiano," esp. 229-37.

¹⁵¹ The Olivian notion of "capitale" in itself is remarkably (and dangerously) open-ended and resistant to traditional bounds. Todeschini notes this ("Olivi e il mercator cristiano," 226-27) and cites a phrase that Olivi attached to money in another of his writings: "multiplicabilis, aggregabilis in infinitum . . . ad omnem contractum valde ductilem."

Olivi's *Tractatus* does not reveal what was current or dominant in scholastic economic thought at the end of the thirteenth century; his insights into the potentialities of balance were fuller and deeper than those of any of his contemporaries, and the likes of his genius are rarely found.¹⁵² Many of Olivi's contemporaries, even those with impressive accomplishments in philosophy and theology, were unable either to grasp the full contours of his model of exchange equilibrium or to accept them – not surprising, perhaps, given the many traditional boundaries transgressed in their realization. But if Olivi's vision does not reveal the common view of things, it reveals something of equal importance: what it was *possible to think and imagine* concerning the boundaries of equality and the workings of systematic equilibrium here at the cusp of the fourteenth century. I conclude this chapter with Olivi's writings not because they provide some kind of conclusion to the scholastic discourse on usury but because in them the "new" model of equilibrium appears, at this early date, with remarkable fullness and clarity of detail. When scholastic writers projected the ideal of *aequalitas* beyond the loan contract to encompass the proper determination of prices and values in the economic landscapes of the thirteenth and fourteenth century, yet more crucial elements of the model emerge, with equal and at times even greater clarity. I provide evidence for this statement in the following chapter.

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¹⁵² Olivi's contemporary, the theologian Godfrey of Fontaines, is one of those who does, indeed, share many of his insights. I discuss Godfrey's opinions in the chapter that follows.