

# Gothenburg Research Institute

## GRI-rapport 2017:1

Bank Management

**Scholasticism, Fair Value and Ursury, According to Odd Langholm**

Sten Jönsson and Thomas Polesie



© Gothenburg Research Institute

All rights reserved. No part of this report may be reproduced without the written permission from the publisher.

Gothenburg Research Institute  
School of Business, Economics and Law  
at University of Gothenburg

P.O. Box 600  
SE-405 30 Göteborg  
Tel: +46 (0)31 - 786 54 13  
Fax: +46 (0)31 - 786 56 19

e-mail: [gri@gri.gu.se](mailto:gri@gri.gu.se)  
[gri.gu.se](http://gri.gu.se) / [gri-bloggen.se](http://gri-bloggen.se)

ISSN 1400-4801

# **Scholasticism, Fair Value and Ursury, According to Odd Langholm**

**Sten Jönsson**

Gothenburg Research Institute,  
School of Business, Economics and Law,  
University of Gothenburg

**Thomas Polesie**

School of Business, Economics and Law,  
University of Gothenburg

## Abstract

Odd Langholm, a prominent Scandinavian scholar of early economic thought, provides us with cues on how to re-consider the fundamental assumptions that go into economic valuation and modelling. “Fair value” was not controversial among the scholastics. A thing is obviously worth what it can be sold for! Problems arise when the parties to a contract disagree – when the market is too thin to produce a fair price. Use a model, and/or give an account of how you calculated, is today’s solution. The scholastics, not yet accustomed to econometric models, assumed that contracts are entered into by competent individuals with free will, and given that money, the counting medium, has no intrinsic value (it is worth what is stamped on the coin), it follows that a contract including interest is not valid. The free will of either party must have been infringed upon. Be it by fraud, force, or ignorance. Odd Langholm informs us about how the idea of the de-personalized market as a system that produces prices, “fair values”, emerged. The problem is not so much how scholastics contributed to current ideas on valuation but what was lost on the way.

*Key words: Fair value, scholasticism, usury, free will, Langholm*

## 1. Introduction

An interesting part of the post-crisis economics literature (McCloskey, 2006, 2010, 2016, Mirowski, 2013, Akerlof & Shiller, 2015, Gordon, 2016) questions assumptions, “facts”, and modes of argument that provide the basis for many truth claims in our neo-liberal times. For some of us the issue boils down to the ethics of individual conduct.

That same issue preoccupied members of the growing Christian<sup>1</sup> communities 1500 years ago and the church leaders tried to answer as best they could. How could sins (always committed by free will!) be compensated to secure a safe journey to paradise (give to the poor!)? The Scholastics, many of them engaged by the new universities, also focused proper behaviour of individuals in social interaction, and its effects on community building. What is a fair price? When is a contract valid? In that discourse, called scholasticism, jurisprudence was further developed, and ideas of valuation, some strange in today’s perspective, were proposed.

Much of the reasoning started from the concept of *free will*. Deficiencies in the community tended to stem from one individual exploiting the weakened will (“akrasia”) of another individual. It is a sin to charge interest when lending money to a man in need because you exploit his weakened will. Besides money is sterile and adds no value in itself. A fair price is what two men of character (“vir constans”) can agree on. Add +/- 50 percent to account for differences in negotiating skills, and you have the limits beyond which transactions are invalid. Roman Law as well as scholastics were greatly influenced by Aristotle. His influence on society has been long lasting. Not until the emergence of the pre-modern State and the rise of Modernism could the ideas of self-regulating markets and the balance between abstractions like “supply” and “demand” take hold. A science of political economics emerged. The 30 Years War - a truly devastating one - marks the change-over to a view of the market (and consequently, the economy) as a “system” after having been a matter of contracts between competent individuals for centuries.

Odd Langholm occupied himself with this. How did it all start? Where are the foundations? What kind of arguments guided proper conduct at different times? How can we understand them in context? We should return to these issues now that algorithmic trade, flash crashes, and internet fraud worry us. One way to start is to read up on Langholm. An overview of his primary area of research can be found in Langholm (1992). We have chosen to focus on three main works from 1998, 1984, and 1979. We start with his 1998 book in order to bring out the

---

<sup>1</sup> The focus on Christian communities stems from the fact that Charlemagne in the year 787 issued an edict (usually called the Charter of Modern Thought) initiating educational reform via the monasteries, which, in some cases, became the seats of the early universities, where some of the schools of thought within “scholasticism” emerged.

crucial role of the free will, how the concept was modified through discourse, and finally provided with an antithesis in the form of Hobbes' Sovereign (the State in modern corporatist literature).

We then move on to the 1979 book to give an account for the drift of the fair price concept in scholastic debate, and how two bases for determining "iustum pretium" (the fair price), labour content, and market price was the result. It should be noted that this, quite complex debate, is driven by the need to decide in court in disputes between individuals. This book illustrates how progress toward a conception of a de-personalized market concept is achieved by participants bringing in new aspects in dialectic reasoning.

Finally the issue of what constitutes an unfair price on credits (ursury) is dealt with in Langholm's book of 1984. Here Langholm provides a fundamental contribution to our understanding of why the charging of interest for loans was rejected in the time of scholastics. It has to do with their conception of money, but above all with the implicit understanding of the economy as a non-growth entity. In such circumstances, as Schumpeter pointed out, there are no opportunities for gainful investment (the alternative cost of capital is zero), and the psychological foundation for charging interest, usually attributed to Fisher (people prefer money now rather than later), also falters because this yearning for money now is rather something that characterizes poor people. Charging interest when lending to poor people who are in dire need of money infringes on their free will and is, thus, unjust. We have then completed a grand tour of scholastic reasoning concerning the fairness of prices, and hopefully learned not to dismiss, offhand, ancient texts as deposits of ignorance and superstition, while we ourselves are modern and enlightened.

## 2. Scholasticism – guiding individuals to proper use of their free will

Langholm's *The Legacy of Scholasticism in Economic Thought* (1998) sifts through the Middle Ages literature where scholars debate the free will of economic actors participating in exchange of goods and services, including loans, and its limitations. He shows how the scholars taught the official doctrine of the Catholic Church by drawing heavily on the heritage of classical antiquity (Aristotle). The topic in focus was the free will. Sin is voluntary, and scholastic advice aimed to fend off the weakening of that will ("akrasia"). Langholm (1998) introduces his topic by referring to Weber's (1968/1925) treatment of power in the general sense ("Macht") and in its particular sense ("Herrschaft"), domination. Domination comes in many forms. Langholm points to two limiting cases in Weber's development of this:

- Domination by virtue of a constellation of interests (particularly monopoly)
- Domination by virtue of authority (power to command, duty to obey)

He argues that Weber is such a good introducer to the topic because of his insistence on putting the concepts "free" and "will" in quotation marks. Those concepts are always relative. It is easy to accept the claim that economic actors in effective markets should be "free" and act "voluntarily", but what does that mean in practical terms? When is the deviation from the norm large enough to render an exchange or a contract invalid?

The free will can be weakened in several aspects. When it is weakened in one of the parties of a transaction the deal is not fair and thus not valid. "Akrasia" is at the very centre since Aristotle. It can be caused by threat/fear, ignorance, or need. It is inappropriate to exploit somebody's need for one's own advantage. This is the reasoning behind the claim that usury (charging interest when lending money) is not permissible. One should not take advantage of a needy person's lack of money for essentials of life. When it comes to threat/fear it is necessary to establish how much intimidation a person should withstand. The Greeks and Roman law set the norm by referring to "a man of character" ("vir constans"). If it is reasonable that a "man of character" would not succumb to the actual threat the complaining party has no case. One should also remember that in those days one was pretty tolerant toward power and threat. There was a principle that is present again and again in the literature on business transactions from ancient times up to, possibly, Hobbes, namely that also "forced will is free will". This principle stems from Aristotle and his example of the captain of a ship in storm who throws cargo over board to save the ship. Was that act voluntary? Yes it was! This example, very often used in the literature, is an illustration of the enormous influence of Aristotle. The purpose with this illustration, it should be

noted, is to show how a compelling force (the storm) combines with a free will (the captain's decision to jettison cargo) to form "mixed acts" (where "forced will is will"). Early liberal economists also used this argument to promote the ideology of "laissez faire".

We should note that only citizens could take their case to court in Rome. The slaves and other un-free men had no rights – not to speak of women.

Ignorance also needs to be judged as to whether it is a reasonable argument for invalidating a contract. The Romans recognized that the parties in a deal may have different negotiating skills (accounted for by the margin of error around the "just price" mentioned above).

We see in accounts, for the ideas of a fair deal, like Langholm's (1998), that greed was taken more or less for granted. Focus was on the fairness of a deal between two persons and its regulation. The fairness had to do with ethical deliberations of the involved parties, as individuals. Things started to change with the Scholastics, but the discourse on business still was a matter of the sinfulness of unfair deals. The general problem of the early Christians was rather what the greedy person should do after becoming rich (give direct to the poor, later via the church, to expiate his sins).

For St. Augustine the free will was the cause of sin. What sins, then, may be forgiven because they are involuntary? Only those caused by ignorance? One can hardly threaten somebody involuntarily? Are some needs more exploitable than others?

Against the background of Aristototele, Roman law, and St Augustine, the scholastics with their centre in the new university of Paris prepared the way for modern economics, later completed via mercantilism, in their preoccupation with moral instruction of Christians: The argument against usury followed several lines.

- The usurer sells time (time belongs to God)
- The ownership of the money passes to the borrower and any gain from the loan thus belongs to him (taking usury is therefore robbery).
- Money is consumed in use and therefore has no value separate from its use
- Money is sterile, i.e., it is a fungible, and therefore has no value beyond its substance.

The argument that the borrower pays interest voluntarily is dismissed on the basis that the borrower is under compulsion via his need. The question whether it was also a sin to pay usury came up also in relation to commercial capital. It seems like most authors argued that if the borrower had no other way of financing trade and had no other source of income it was permissible to borrow trade capital against interest.

The scholastic doctrine concerning usury started to brake down in the 16th century with the argument of the Salamancan scholars, first Molina and later

de Lugo, who argued that, by lending the money, the lender sacrifices what he could have earned by investing it otherwise, i.e., interest is a (opportunity) cost. The latter author (de Lugo) stressed that the most important aspect here was the doctrine that contracts must be kept whatever the terms. Thereby he foreshadowed Thomas Hobbes, the staunch anti-Aristotelian. Dealing with the justice of contracts required an authority that could hear the arguments – a Sovereign arbiter – the state.

Concerning the idea of a just price the scholastics had to fight a drawn-out war against a new approach of the opposition from the late 13th century (Langholm, 1998, Chapter 5 and 6). This new approach stressed ownership (“Anyone is the moderator and arbiter of his own thing” (quoted from Emperor Constantine’s ordinance) combined with the maxim “A thing is worth as much as it can be sold for”. Together these maxims eliminate “morality” from the discussion (and thereby the idea of “just” price) and, at the same time, they legitimize the use of economic power. Henry of Ghent led the way by arguing that the solution here was to rewrite both maxims by stressing the “can” (be sold for) instead of the ancient “ought to” connotation, which would eliminate the normative dimension. Others added various general conditions characterizing a fair price, like “maintained equality between buyer and seller”, “just and reasonable”, “without fraud” etc. But it was still unjust to exploit the “need” of an individual. Gradually the market idea was introduced as “the common need” (*indigentia communis*) of those who can exchange with each other. Langholm (1998, p. 86ff) discusses this gradual establishment of the market as the reference point by giving accounts of then current controversies concerning the “common estimate” of the market and how it should be understood. The market price in a market that functions normally is uncontroversial, but what about the, often overlooked, situation when conditions are not normal? Speculation, price discrimination, collusion and monopoly are conditions that are taken up here.

Speculation in foodstuff is generally rejected (although the prudent man who gather reserves for emergencies, may sell a surplus at the market price), but otherwise various forms of lawful exchange were condoned. The catchword for illegal exchange came to be “inducing dearth”, which was not acceptable. Price discrimination, for instance in the form of charging visitors more than villagers was prohibited in a capitulary by Carloman, King of the West Franks, in 884, and this was subject to scholastic comment.

This initiated the distinction between necessities and luxuries. The latter kind was seen to be worth whatever the seller could extort from the buyer (short of by fraud or force).

The scholastic literature on monopoly rested largely on the story (in *Politics* by Aristotle) about the philosopher Thales, who was expelled from Syracuse for renting all olive presses early from Miletus and Choios, and then letting them out at a large profit when the season arrived. This was, for a while, interpreted as Thales wanting to show that philosophers could also become businessmen

if they wanted to, but Albert the Great argued that what he did was harmful to society. This is the reason why monopolies were prohibited by law (Emperor Zeno's decree from 483 A.D.).

In time the school of Salamanca modified the ruling on just prices, e.g., by Soto, to "A thing is worth as much as it can be sold for in the absence of monopoly, fraud and deceit."

The consequence of these developments was the re-establishment of the principle that the owner can dispose of his property at will and the primacy of the principle that justice is based on contracts being kept (whatever their content). This meant that the scholastic paradigm was in effect undermined. Taking the "common estimate" as the measure of a just price meant that the just price had been "depersonalized". Now the abstract phenomena of supply and demand were in focus rather than the subjective responsibility of persons (as sellers or buyers).

There was, we must remind ourselves, an undercurrent of viewing exchange as something of mutual benefit through the scholastic literature. Scotus goes as far as emphasising that there is an element of mutual gift between the parties. Prices may, thus, vary on the basis of what the parties agree to. Still there was the problem of compulsion, exploitation of need, and deceit on both sides, that may limit the justice of an exchange. The discussion on the just price and the weakening of the will went on until arguments - similar to the ones de Lugo presented later - on usury emerged with Cajetan's commentary on Aquinas. Cajetan argued that the dilemma of compulsion can only be resolved by distinguishing between "causa", i.e., the motivation that prompts a person to agreement, and "modus", i.e., the circumstances under which the exchange comes about (at an auction, through middlemen, etc.). A person who offers to sell something must expect to get a lower price than the person who is approached by somebody with an offer to buy (one can see supply and demand curves behind this). The just price should be based in "modus" rather than in "causa". This allows for a wider range of variation in prices (Which, seemingly, brings "arbitrage" into play.) Cajetan's reasoning won support, not least in the Salamanca school. This represents a further step toward "de-personalization" of economic ethics (Langholm, 1998, p. 116).

After devoting a chapter to the price of labour (wages), which is generally accepted to be different than the price of goods, because the person seeking employment is at a disadvantage, Langholm arrives at the antithesis of scholasticism in the form of Hobbes' argument.

## **Hobbes antithesis**

Thomas Hobbes (1588–1679) provided the argument for "possessive individualism" even if he did not intend to. There are many interpretations of

the Hobbes oeuvre - among them the Taylor-Warrender thesis (cf Murray, 1997). The debate on the proper interpretation is still on. Langholm (1998) brings out a reading that ties in with the development of classical economics:

In the pre-societal condition of Nature – everybody’s war against everybody - the individual is guided by one feeling: fear. In such a situation reason compels the individual to seek peace. The key then is to keep, always, covenant (contract) - to build peace by being trustworthy. Justice becomes the keeping of contract (The individual is bound by contract, only the Sovereign can release him from it). As the “social contract” is established the Sovereign authority (the state) may enact any law it pleases, and decide on any quarrel between members. The problem, then, is what is the relation between Natural Law (derived by the individual from The Golden Rule, and reason) and the regulation by Sovereign Law? It is, after all, the duty of all members to obey the Sovereign Law! When the individual is free to pursue gain by contract, that pursuit will sometimes conflict with Natural Law! Hobbes solves this by distinguishing between Justice (according to Law) and Charity (according to conscience). Charity is the duty to participate in distribution of gain/profit to the poor. But charity cannot, by definition, be regulated by Sovereign Law. It is associated with a function or activity, like almsgiving. It is the virtue by which we share our surpluses (voluntarily). If the Law compels us to give it is no longer charity.

Hobbes thus “stripped justice of all relationship with economic contracts” (Langholm, 1998, p. 156) and thereby cleared the way for classic economics. When the market is closed there is only charity.

Returning to scholasticism we may note that it was preoccupied, as far as economic thought goes, with the regulation of self-interested exercise of bargaining power. Their theoretical basis was Natural Law defined by, e.g., Gratian as “that which is contained in the Scriptures and the Gospels, by which anyone is commanded to do to others what he would have done to himself...” (Langholm, 1998, p. 162). The Natural Law, however, gives rise to certain rights, which were articulated rather late, especially by members of the Salamanca school, like Francisco Suárez, to mean two different things: the right to claim (or moral power), for instance, wage for labour, and the right to property. The idea of property rights points forward to John Locke (1632–1704), who, in his *Two Treatises of Government* (1689) argues that the purpose of government is to preserve property. Langholm points out that Locke’s argument is not so much a matter of protecting the weak against the strong but rather protecting the latter against interference from the government (Hobbes’ Sovereign).

### 3. What is a “fair price”?

In his book “Price and Value in the Aristotelian Tradition – A study in scholastic sources” (1979) Langholm traces the conceptual drift underlying the controversy whether the basis for fair price (*iustum pretium*) is the labour content of goods or the competitive market price. It all started with the *Nicomachean Ethics* (NE) by Aristotle, who in Book V (chapter 5 - On Justice) treats economic exchange. The trouble, or if you will, good fortune, is that the text in Book V is not very clear, which leaves the text open to variations in the abundance of commentaries available after the “rediscovery” of NE via the translation to Latin a few years before 1250 in the *Translatio Lincolniensis*.<sup>2</sup>

The “drift” of concepts concerning fair price, via the commentaries on NE by various scholars, constitutes a development towards a more stringent formulation by early economists. Langholm describes the different “schools” of thought relating to the issue as a tree, with different scholars representing different branches. By giving an, often quite detailed, analysis he can give us glimpses of what has been lost in transition. This may stimulate further thought on fair prices and the increasing presence of “algorithmic trade” in the financial area in our time. Langholm’s study is structured according to the “branches” of the Aristotelian value theory.

#### **The Robert Grossete branch**

Robert Grossete first translated Aristotle’s text, and an anonymous Greek commentary to it, into Latin. He was bishop of Lincoln. The diocese of Lincoln included the University of Oxford to which Robert had close links. The translation, *Translatio Licolnensis*, included Aristotle’s exchange model, which had a great influence on later interpretations. To illustrate how difficult it is to trace the “conceptual drift” in the debate on fair value one can first note that Aristotle himself seems to be unduly repetitious in his discussion of the model. It has been suggested that the text should be read as three separate redactions, with the first and third considered less complete. Aristotle’s topic is the required “reciprocity” (proportionality) for trade, involving two producers and two products, to happen at all. The ‘second redaction’ states that economic exchange requires a common measure; *opus*, which holds society together.

---

<sup>2</sup> Before this there was another work in the form of commentary to NE by an Arabian scholar, Averroes, in the so called *Summa Alexandrinorum* (translated in Toledo by Hermannus Alemannus - Herman the German), but this is of little use in dealing with economic exchange, according to Langholm.

Without opus there is no exchange. This word, “opus” is Grossete’s translation of a Greek word with multiple meanings (1. usus = advantage, service, use, compare “utilitas” (and later “utility”); 2. opus = need in a somewhat passive sense of necessity, compare “necessitas”; and 3. indigentia = need in the more active form of craving, compare “demand”). Langholm shows how, over centuries of commentary, the meaning of “indigentia” takes over, supporting the competitive market price as the fair price. In this discussion of the Grossete branch, or rather “tree trunk” from which other branches grew, Langholm also discusses other matters of translation from Greek that have influenced the development of value theory. This, detailed and well documented as it is, seems to risk distracting us amateur readers from the main line of inquiry. We now turn to the alternative emphasis in value theory represented by Albert Magnus and followers.

### The Albertus Magnus branch

In order to be able to map arguments and their “drift” it is necessary to dwell upon the gist of Aristotle’s exchange model to see how the different branches fit together.

The exchange model should be viewed as providing us with two relations at the same time; the one between products and the one between producers. The main example used by Aristotle is a builder and a shoemaker exchanging a building for shoes. How can we conceive of the required reciprocity (proportionality) for trade to take place here? Grossete had given the market value aspect via “indigentia”. Albert gives us the labour theory of value.

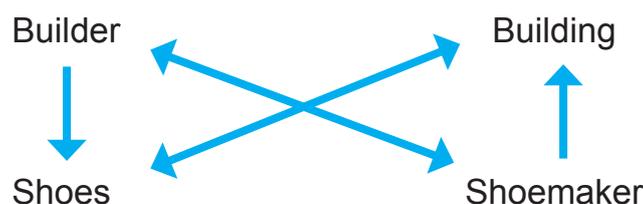


Figure 1. The exchange model applied to a builder and a shoemaker

We have to posit some common measure to accomplish the trade – which in itself is good since it keeps society together - and this measure is money. Now, for the builder or shoemaker to find it worthwhile to produce their products, the price that they get for their products must cover their cost for labour and expenses. Otherwise there would be no trade and society will suffer the consequences. Many commentators do not pay much attention to this, but Langholm points

out that this means that labour and expenses (often mentioned as a pair) then serves as a regulator rather than as a price mechanism. He goes through later commentators and especially points to Marx's labour value theory, which starts from the equality of labour (one hour work has the same price whatever the work). This is obviously a socio-political claim rather than an economic one, since there will be differentiation in wages depending on the demand for the products. The problem is that if you try to save labour value theory by turning to the market for the determination of wages you end up with circular reasoning based in market values. So, Marx was mistaken.

Albert Magnus got hold of an early copy of *Translatio Lincolniensis* and produced two commentaries with, notably, Thomas Aquinas as assistant. The first one<sup>3</sup> contains the first application of measurement theory to the question of whether money is the proper measure of commutables. (This issue was later taken up by the "Averroists" of the Paris school). There is a natural economic order in which things are graded differently in relation to *opus* (see above, need in the sense of necessity). In the second commentary Albert changed his mind using "labour and expenses" (together as one term) as the measure.

Langholm follows a line of scholars developing the labour theory of value, mentioning, e.g., Versor's contribution, which explained differences in terms of "relative production time". He also comments on the efforts to connect Marxist value theory to the scholastic tradition by pointing out that the only mention Marx makes of Aristotle's *Ethics* in "Das Kapital" is to claim that since Aristotle lived in another time he did not understand "die Gleichheit und gleiche Gültigkeit aller Arbeiten".

Langholm asks whether Albert Magnus intended a "quantity of labour" explanation and draws the conclusion one cannot say because Albert himself did not distinguish between the two operations that are implied in the exchange model (figure 1): There is a required scaling operation since a building obviously is a larger piece of work than a pair of shoes (it has to be reduced to a comparable unit), and there is an inter-occupational comparison (a unit of house building as compared to a unit of shoemaking). This latter operation is the one Marx does not wish to do for political reasons (a workhour is a workhour), because if he were to do that he would arrive at distinctions between "producer worth" via the labour market, and this would generate the mentioned circle (value of labour (and labourers) determined by the value of products).

The more pregnant development of Albert's theory has to do with his discussion of why the value of exchange has to comply with the cost of production – if it doesn't the artisan will stop doing the art. Several followers of

---

<sup>3</sup> This commentary is important because it was the first time that Aristotle's measurement theory (from *Metaphysics*, and articulated by Averroes) is applied to value. That theory says that the smallest part of a kind is its measure. It is also important because Langholm is the first to study it (it, the commentary, had never reached the printing press).

Albert take up the “destruction of arts”<sup>4</sup>. Langholm points out that the question of what an artisan, who stops producing a product, is supposed to do (building houses instead of shoes?) was never raised here.

In sum: One cannot say that Albert Magnus was pro labour theory of value, but he started it rolling by pointing to the role of “labour and expenses” as a regulator of prices – if price did not cover them there would be no production and no exchange.

## The Thomas Aquinas branch

Only a small part of the texts of Tomas Aquinas deals with the topic of value in the Aristotelian tradition. He discusses the issue of just price in *Summa Theologiae*. His basic orientation, as we know, was toward moral instruction - economics was not his cup of tea - so Aristotle was not a prime reference. Still Thomas played an important role by contributing two related elements to the value theory; his theory of double measure of commutables, and his price formula.

While Aristotle introduced money as the measure of exchange it was Thomas who emphasised the role of human need. Clearly indigentia is not a measure in the sense that money is! Indigentia (need) drives/causes the exchange and money measures it. This double measure sets the stage for later developments.

Aquinas’ other contribution is the related price formula, which claims that price varies with human need. Thereby indigentia becomes defined as a measure – as cause of exchange. Langholm traces the influence of Thomas through a large number of authors over a couple of hundred years, often irritated by errors causing decline in the influence of Aristotelian value theory. The clash between two prominent Protestant Aristotelians in Germany at the turn of the 16th century (into the 17th), Havenreuter and Golius, leads to two famous Natural Law treatises discussing price formation, Grotius and Pufendorf, separating necessities and luxuries.<sup>5</sup>

## The branch of Henricus de Frimaria

Recent research has discovered a number of “scattered” manuscripts with a new type of commentary originating in the Paris arts faculty. The most distinguished of those was by Henricus. The crucial year was 1277 when the bishop of Paris condemned the teachings of the so-called “Averroists” (indicating that they were atheists - since Averroes was an Arab scholar).

---

<sup>4</sup> One is reminded of Schumpeter’s “creative destruction” – Langholm praises Schumpeter as a great economic historian in the introduction to the book.

<sup>5</sup> Now Mercantilism was on the rise, keeping track of income and outgo.

Henricus got his doctorate in Paris where he held a professorship in theology for many years. Later he held academic and administrative positions in Erfurt, where he died in 1340. The writings of the Paris (Averroist) school often were in the style of questions (or questionings). The main contribution of Henricus to Aristotelian economics is to bring in the notion of scarcity. The idea is introduced by recounting the fable of the “mouse of Casilium” (At the time of the Second Punic War a man caught a mouse (“rather a rat” says Langholm), sold it for a large sum of money, and died of starvation in the beleaguered city.). This brings scarcity into the picture. Aggregation takes indigentia closer to market demand. Henricus points out that it is not crop failures and famine in themselves that raise the price of bread (given indigentia); it is rather that they increase indigentia, which in turn raises the price. No one had understood indigentia as a variable like this before. Now the stage was set for aggregate analysis! Value is determined by “common need for something scarce”. However, the Aristotelian tradition had only mastered one side of the market price determination – the role of indigentia – it never was able to deal properly with the supply side.

### **The branch of Johannes Buridanus**

Buridan was rector of the University of Paris on two occasions, still active there in 1358. Colourful and ingenious Buridan is probably the most important economist of the Paris “Averroists”. (The “Buridan’s ass” paradox, used in satirizing philosophical determinism, might be known to the reader; an ass, equally hungry and thirsty, is placed at equal distances from food and water, and cannot make up its mind.)

Buridan’s contribution is the following: There is an objection against the hypothesis that indigentia is the natural measure of goods in exchange, since that would imply that you sell dearer to the poor in great need than to the rich in less need. He responds that we must take poverty in its true sense – anybody is poor when he desires something that he does not have, even if it is a luxury thing. This takes the discussion a step further than the classical Thomist orientation toward “necessities”, toward what we call “effective demand”. The poor also desire luxury things but do not have the ability to pay. With this we have a general conception of aggregate demand (even if Buridan also failed to address the adjustments of supply) pointing ahead to the Austrian school of “subjective” value theory and laissez-faire economics. In going through subsequent literature Langholm points out that Thomas Hobbes (Leviathan) inherited his “economics” from Buridan. Illustrating the importance of Buridan, Langholm cites the Marxist economist Mandel as writing: “Economists from Aristotle in a long line including the French monk Buridan [...] were troubled by a meaningless quantitative concept of utility” (Langholm, 1979, p. 139). The success of value theory as developed into the 19th century is to a significant degree dependant

upon Buridan's restatement of indigentia into a universal demand concept.

## The branch of Geraldus Odonis

The missing link in Aristotelian value theory - concerning the issue of the value of labour - was provided by Odonis, a Franciscan monk teaching in Paris by 1328. He abandoned teaching early to pursue a successful ecclesiastical career. Langholm puts focus on Odonis' commentary on the issue of the value of labour. Here Odonis represents an analytical break-through. He rejects Thomas Aquinas' labour value theory because it deals with the properties of the producers rather than the demand for products. He points to the empirical fact that different awards go to different professions. What is the nature of the builder's merits in comparison with the shoemaker's? It has something to do with his practising *nobilis ars*, but he does not say in what this nobility consists. This is dangerous ground since the equality of participants in the market is posited by Aristotelians. Langholm asks us to consider the work context in which Odonis, an Aristotelian, who belonged to the Franciscan order, which did not allow the use of Aristotle, tries to explain Aristotle. He draws on the Franciscan value theory with its triple dimensions: *virtuositas* (objective value in use), *raritas* (scarcity in the face of need), *complacibilitas* (desirability), adding *pretiositas* (preciousness) of human productive skills. He who cuts the stone in the quarry gets less than the architect who guides the work of the labourers. The three value dimensions constitute the power of scarce labour to command a higher product price through product scarcity. With this Odonis produced a synthesis of product and labour value theory. His influence is demonstrated by references to him by two distinguished Aristotelian commentators in the next centuries (Maier of Scotland, and Crell of Krakow, Poland).

## Summary

In this book Langholm illustrates how scholars in this tradition dealt with complex issues, not by reducing everything to "utility" (one dimension), but by reasoning on the basis of tradition and existing texts. They employed dialectics and sought to persuade by good arguments. Scientific proof by experiments or measurement was not introduced yet. Like in modern times, schools of thought emerged, as arguments could not be settled by hypothesis testing and error elimination (like we tell our students to do nowadays). It should be noted that progress, sometimes understood with hindsight, was achieved by bringing in new dimensions. To be successful in this context you had to be well read – and the libraries were located in monasteries and their related universities.

## 4. The Aristotelian analysis of usury

In this book (1984) Langholm presents, and interprets in a new way, the arguments against usury in the scholastic tradition. It is well written – best among the books reviewed here – and has a good structure with arguments building up to the concluding explanation of why the modernist economists have misunderstood and misrepresented the standpoint of scholastics on usury. For a non-Latin speaker it is also comforting to have the quoted passages from the scholastic masters translated to English.

To appreciate the pedagogical build-up of the argument the reader may benefit from a glimpse of the final conclusion – that way one may see where we are heading from the start. This is Langholm’s argument:

Böhm-Bawerk in his great work on interest theory, more than a hundred years ago, formulated three assumptions that have since been the basis for two lines of development of interest theory. One such line, which has usually been associated with Fisher, but initiated by Jevons, may be called the psychological line. It assumes that people prefer money now rather than in the future just because the pleasures of enjoying it are more proximate now. It was especially pointed out that some thoughtless, often poor, people, have this propensity.

The other line, initiated by Menger, and developed by economists like Wiksell, Schumpeter and Hayek, is based in theories of economic growth (which provides “investment opportunities”, and therefore interest is an opportunity cost).

Langholm starts his reasoning from an assumption of a stationary economy. He quotes Schumpeter to illustrate what this means: “Within a circular flow, and in a market which is in equilibrium it is impossible with a given sum of money to obtain a greater money sum”. Risk was not a central concern to scholastics since they focus contract between equals. One should also consider the context, which included little of credit institutions (with bills of exchange between merchant houses as an occasional exception). Lending money, then, was a matter between individuals with the lender, who has money, in a monopolist position vis-a-vis the borrower.

One will find no scholastic who does not accept the principle that a thing is worth what it can be sold for “in the absence of ignorance, fraud and duress”. The problem is how to establish par (what is a fair price) when either party is not satisfied or when any of the mentioned manipulations/deceptions is present.

The scholastics accepted trade as a good thing. The person with a surplus of potatoes gets it reduced by exchange with the baker and at the same time eliminates his deficit of bread. Both are better off. Money was invented to make trade easier. Money was seen as coin with a value stamped on it. It was a sterile instrument whereby the value of potatoes and bread could be compared.

In the “absence of fraud and ignorance, and deducting for legitimate extrinsic titles, a positive rate of interest on a money loan must always, because of the

sterility of money, be the result of undue pressure on the borrower” (Langholm, 1984, p. 144). This kind of exploitation of the needs of the borrower is equal to robbery. Langholm discusses further details on the status of the transaction when the borrower consents to paying usury (with reference to the Aristotelian example of “mixed will” (remember the captain that tosses cargo overboard to weather the storm!)). No! That cannot excuse usury either, because the borrower is forced by his need for ready money!

How, then, does Langholm through the book, build the argument that backs up, persuasively, this conclusion?

He starts, after a chapter on his aims and sources, with the equitable contract. Referring to Aristotle’s Ethics, Book V, he points out that the discussion there is about justice (what are the principles of equivalence in exchange), and that this is where scholastics found inspiration in the determination of the “just price”. Sometimes the Sovereign may determine the price, *iudicatum*, (e.g., to limit the damaging effects of scarcity), sometimes the parties agree among themselves, *pactum*, and sometimes the terms of contract are determined to comply with parity or equivalence in a strict sense, *contrapactum*. In cases of disagreement between the parties some rules of thumb had to be present for judging whether a price was fair or not, and also whether a contract is valid. Such judgments could have two purposes, (1) to arrive at correctives to the proposed price or (2) to check whether the actual terms of the contract indicate that free bargaining had been operative. (It should be noted that Thomas Hobbes ridiculed this idea of equality and claimed that justice is a technical term referring, not to the terms of the contract, but to the performance of covenant). Now, with free bargaining, a thing is worth what it can be sold for, provided that the buyer knows what he buys. Consent presupposes understanding of the terms of the contract. Given such understanding we arrive at the border case of conditional consent, so well illustrated by Aristotle by the captain’s decision to toss cargo overboard to save the ship in a storm. The captain was subject to compulsion from an impersonal force (the storm), but can be said to have made the decision to toss the cargo voluntarily. When it comes to coercion (duress caused by a human agent), the issues are more difficult to resolve because of the scholastic focus on justice between individuals (not collectives). But there is the same double face of the situation. The borrower consents to pay usury willingly in order to be able to use the money, even if he would prefer to have it for free. Now Langholm reminds us that if you accept the principle that a thing is worth what it can be sold for there is no basis for deciding between disagreeing parties (we need some objective value for that). This is where the cost basis for determining a just price comes in.

There were two schools among later economists as well as among scholastics, cost or market. But in a stationary economy there is every reason to believe that the two will come together. Furthermore, the tendency among modern debaters to look upon one party’s profit as the other party’s loss is mistaken.

Both parties benefit from the exchange! (no zero-sum game!). The utility of the borrower should not matter (corn for the starving child vs truffle for the bishop's table). In time, the scholastics came to focus on necessities (and leave the price of luxuries free). Still there was an opening for the lender to use the "cost" argument for charging legitimate interest, either because abstaining from the sum of money would cause him "emergent" loss (*damnum emergens*) and/or foregone "cessant" gain (*damnum cessans*). Langholm claims to have shown that "cost" and "market" are really two sides of the same doctrine in a stationary economy. He suggests that we should refer to the analogy of the "just price" (as far as it goes) in order to understand the Aristotelian discussion of usury.

Next Langholm turns to the teleology (purpose) of money. Long before the scholastics had access to Aristotle (about 1250) the idea that usury is wrong because "it forces a fruit from sterile money" had travelled from the east via the writings of Church Fathers. The basic attitude of the scholastics vis-à-vis the purpose of money is that it was invented to make trade easier: "usury (*obolostatica*) is most reasonably hated, because its gain comes from money itself and not from that for the sake of which money was invented" (Moerbeke's translation (to Latin) of Aristotle's *Politics*). The key word here – "*obolostatica*" – literally means "weighing of coins" and therefore Aristotle might have meant "debasement of currency". Thomas Aquinas defines usury as a form of wealth-getting which makes money breed money, but this is against nature! Here Langholm stresses that the most important aspect, when it comes to grasping the Aristotelian theory of usury, is to understand that the theory is based on a conception of money as coin. It is not so much that money cannot breed as the opinion that usury is an unnatural use of money.

The idea of what is the "natural" use of money stems, according to Langholm, from an anonymous comment (6th century?) to the scene in the Bible (Matthew) where Christ throws the merchants out of the temple:

"More cursed than all merchants is the usurer, for he sells a thing not bought, as do the merchants, but given by God, and afterwards takes back his good, removing that of another with his own; a merchant, however, does not take back a good once sold."

The point here is that the ownership of the money lent is transferred to the borrower, and whatever he uses it for cannot be taken back by the lender. How is it then - was the counterargument - that a house or a horse can be lent against a fee stemming from the benefits of use by the borrower? Ah, but in these cases the ownership does not pass to the borrower. But since the value of the things mentioned deteriorates with use, which money does not, the doctrine, in time, had to be limited to fungibles - things that could be returned in kind, of the same quality (like corn, wine, coin).

Langholm points out that risk was never an argument for charging interest

in scholasticism. Focus was on the concrete coin form of money (not on the abstract purchasing power idea). Thomas Aquinas settled the matter “All other things have some utility from themselves, money, however, has not, but is the measure of the utility of other things. Therefore, usury amounts to “diversifying the measure” (money should be paid back in exactly what you borrowed). This is the *mutuum* idea of contract. To include a “use value”, which is entirely fictitious, means “diversifying the measure”. Charging interest, on top of the return of the money borrowed, means selling two things; the substance of the money and the use of the money. Thomas Aquina’s idea here is that the concrete money borrowed is supposed to be consumed immediately, e.g., to buy food. Money does not deteriorate in use, like a horse, it is consumed, completely gone! This argument, that money is consumed, is another way of claiming that it is sterile. Money does not bear fruit!

But it does! - later authors claimed. Human industry begets money and makes it bear fruit! True that the borrower reaps some benefit from his use of the borrowed money (if he is an artisan or a merchant), but this benefit is due to his industry, not to the sterile money, and cannot be the basis for claiming interest payment on the loan. It was here that the attack on the Aristotelian conception on money came. Francis Hutcheson, Adam Smith’s teacher in economics, argued that “labour employed in managing money in trade, or manufacture, will make it as fruitful as anything.” (1755). But it was the “heretic” Franciscan monk Antonino of Florence who refuted the sterility of money doctrine. Sombart, Weber, Schumpeter, comment on this feat, and Benjamin Franklin uses it in his letter “Advice to a Young Tradesman” (the sterility of money was refuted with reference to the “industry” of people).

Sankt Bernardino of Siena, one of Langholm’s most quoted sources, is often referred to concerning usury, and especially to his “*De temporis venditione*” (sermon 34) dealing with problems of just equivalence in contracts involving a time element. Early scholastics had claimed that the usurer was selling time “a thing not bought but given by God”, which was a sin since time is given to all. The objections came in terms of depletion or growth of value over time. For goods that, with the passage of time, increase in value it is permissible to charge a higher price without this being called usury. Some argued that the injunction against selling time applies only to time in an abstract metaphysical sense, not to duration related to things. Olivi argued that since the time remaining of the stipulated loan period is time properly belonging to the borrower (for him to exercise his industry) he is free to bargain with the lender about a reduction in the sum to be repaid. Sankt Bernardino accepted this argument. Noonan (1957), who paid much attention to Bernardino, labels this the worst “blunder in the whole tradition of usury:” Langholm looks at different sources and finds that the anticipating debtor selling back his own time appears quite often in the scholastic literature. What the authors on usury stress is rather that no one should be allowed to make a profit just because time passes. But a merchant may

legitimately store goods expecting the price to go up as scarcity sets in? True, but in the case of money, even if the purchasing power falls as the price of the goods goes up, will, compared to itself, always be worth the amount stamped on the coin. A natural thing (like corn) may increase in value, but pushing the value of artificial things above the artifice it embodies, is usury. Langholm returns to Aristotle's *Metaphysics*, where he discusses measurement – an object is measured by the smallest unit of its kind. Even if some kind of measure is required, there is no ground for going beyond first principles in a mutuum. When money is exchanged for money, corn for corn, or wine for wine each thing provides its own measure. In sum, there are three arguments here against paying usury for a loan:

- an object is valued above its nature or artifice (1)
- a fruitless object is made profitable (2)
- of two things which are of one value, one is made to increase with the other (3)

This latter argument relates to efforts to separate the value of substance of money from the value of use of the money. But such separation cannot be done since the very purpose of money is to be used in trade – use becomes part of the definition of money. Scholastic authors “clung” to this triple argument for centuries. But then this foreshortening of the time perspective came under attack as psychology came in sight. People prefer money today before money later.

Now we are back at what was stated at the beginning of this review of Langholm's work on the Aristotelian analysis of usury, and we may tie it together: In his fundamental history of capital and interest Böhm-Bawerk (1884) identified three necessary assumptions for interest to exist. (1) In a growing economy, there will be more goods available in the future, (2) People tend to underestimate their needs in the future, (3) Entrepreneurs want to start their production process now rather delay and start later. This third assumption indicated that the capitalistic production process has a time extension. Böhm-Bawerk discusses the money payments over its duration. In passing he provides a critique of Marx (No entrepreneurs do not exploit the workers! On the contrary, they pay wages before the work they contributed has resulted in income!). This provided the basis for the dominating branch of interest theory, which looks upon interest as a parameter within economic growth.

Langholm's closing arguments for properly understanding the scholastic position (emergent and shifting as it was) are based in an understanding that must have been that of the scholastics, namely that the economy is not growing.

In a stationary economy, somewhat touched upon by Schumpeter (1954) as having zero interest, there are ample reasons to look upon trade as contracting between equal individuals. Then it is necessary to determine what is required for

a contract to be valid and a price to be just. If the two parties agree on the terms, so much the better, but what if either party complains – on what grounds can the proposed agreement be corrected or invalidated? If you, in a stationary economy with no interest rate, find a contract requiring the borrower to pay interest, then the borrower must have been subject to undue coercion. His need was exploited by the lender. The contract is invalid.

## 5. Discussion

New schools of thought in economics (or any science, see Kuhn, 1962) have traditionally directed part of their rhetoric toward ridicule of the superstition and/or irrationality of previous schools. A consequence of this is that later generations will get a distorted view of the old schools. Odd Langholm tries to explain the reasoning of the scholastics against the background of the worldview they took for granted (like we take for granted that there are equilibrium market prices even if no man has ever seen a market in equilibrium). He shows that given those world view premises their reasoning is understandable and insightful. There are good reasons to pay attention to the conclusions the scholastics draw from their examples - given their unstated understanding of the stationary economy, and their focus on the fair price in transactions between free and equal individuals.

Those reasons become pertinent now when we have had a close to zero interest for some time combined with a very small growth in individual average pay over the last 50 years (Foroohar, 2016, for further statistics on the USA, see also Gordon, 2016), and with a financial crisis that has gendered a need for novel approaches to explanation. We have legislation that increasingly favours debt over equity, central banks flush the economies with money that does not seem to have much effect on the real economy, real estate being the only asset class worth investing in, while 75 percent of the trading on the New York stock exchanges is done by computers controlled by algorithms. The most advanced economy has taken a wrong turn and capitalism needs to be fixed Foroohar (2016) claims.

Scholasticism, as we know it, has its origin in the renaissance of Charlemagne, which included a decree about establishing schools in all abbeys (hence “scholasticism”). The influence of Aristotle in scholasticism is due to the rediscovery of the Greek philosophers, which had been lost with the fall of the Western (Latin) Roman empire. New translations arrived via Spanish translations of Arabic versions of his texts and via visits to Constantinople (Greek texts; the Crusades). It was the manner of reasoning (dialectical) around aspects of justice and ethics that is distinguishing for scholasticism, which reached its apex of influence with the founding of universities in Paris, Oxford, Cambridge and later Salamanca, and then was pushed aside by Modernism and the new fascination with science of the 17th century, and later by classical economics. We could gain some new insights in our current predicament by returning to earlier kinds of reasoning, albeit conscious of the differences in context.

Langholm shows how the idea of the economy as a self-regulating system with abstract concepts like markets and equilibria grew out of the debate on the common good. The problem they dealt with (although not always too clearly) was on what basis one should judge if the individual parties do not agree. On

what basis should judgment be based then?

The answer is that it depends on whether the free will of well-informed men of character (not easily intimidated) has been tampered with. This is the explanation Langholm uses (given a stationary economy, which Schumpeter mentioned, as not providing a basis for a positive rate of interest): if we observe an interest charge under such circumstances it must be the result of improper weakening of the will of the paying party. Langholm can help us re-frame in a different context.

### **Free will in focus**

The arguably most interesting aspect of Langholm's reading of the scholastic arguments is his pointing out that the free will of individuals in contracting is at the centre of scholastic treatment of things. Neo-classical economists will argue that, of course, a free market presupposes individual free will. It is part of the definition of the free market. It is assumed that market participants will have free will, otherwise the theory is not valid. Precisely! This is what the scholastics tended to say!

Akerlof & Shiller (2015) argue that if there is an opportunity for manipulation and deception in a market it will be exploited, and they give a large number of real life, well documented, examples. This requires a re-assessment of what market equilibrium entails because this is where the fair price emerges as a by-product. It certainly cannot be a Pareto-optimum, i.e., the market will go on searching for the right price until all participants are as well off as they can be. The optimality claim is based on purely mathematical deduction given fully informed and rational participants. Akerlof & Shiller (ibid introduction + notes 17 and 18) express surprise that the Pareto text can still have such lasting influence since it is not possible to test whether the assumption of informed and rational participants is valid or not. Hayek (1944), who was a wise ideologue for neo-classical economics, argued that we do not know how the market works but we should submit to its magic, because the alternative, socialism, is so much worse (since bureaucrats cannot know all the preferences of all the citizens). The beautiful idea of equality in socialism will degenerate into destructive power games between leaders and suppression of the people (since bureaucrats are utility maximizers too).

What was achieved, when late scholastics and early classical economists replaced the contract between individuals with the self-regulating market, was that the fair price was de-personalized ("The Market" becomes a black box that produces "fair prices"). This made mathematical analysis, and representation by geometry, possible. In a sense, early scholastics applied the same kind of rhetorical trick to set the stage for reasoning on the fairness of contracts on the basis of Natural Law.

One strength of the scholastic approach, that we do not normally recognize, is that their topic really was what price that should be the norm when there is no market price. This is what brings in the legal reasoning into scholasticism. Two parties must be heard, jurisprudence applied and justice sought. This is at odds with current practices in, e.g., accounting regulation, where the rule is that market prices should be used, and if they don't exist an estimate could replace them (with the reporting company required to show how the estimate was done - usually by referring to a mathematical model, like Black & Scholes). The legalistic approach used by scholasticism (and today's "compliance") requires that more than one person must accept the arguments as good. This brings in the issue of rationality.

In neo-classical economics rationality has been a matter of decision in favour of the optimal choice among alternatives given the goal of the decision maker (self-interest). Being rational in the presence of multiple goals and other interested parties is quite another matter. Kant's (1781) concept of rationality comes to mind - a rational person is a person who can give good reasons for action. (Central to his philosophy is, by the way, the free will of individuals.) Giving good reasons for a certain judgment on what is a fair price of a thing or money presupposes knowledge of the values celebrated by the involved persons. Context becomes visible, a feat more easily accomplished in an organization or in society than in a market where "caveat emptor" is the rule. If McCloskey (2016) is right - if ideas, not capital or institutions, transformed the world - and she has good evidence to back up her claim, Kant's rationality gains credence. We should be more attentive to the multiplicity of arguments that may be relevant as reasons for action inside and outward of organizations. Then the kind of reasoning that the scholastics, as represented by Langholm, becomes an interesting source for reflection. He helps us re-consider by taking us out of one context and into another. This may help us generate a fruitful approach to the complexities and contradictions (to use Merton's (1968) words) of the current situation.

## References

- Akerlof, George A. and Shiller, Robert J. (2015), *Phishing for phools – The Economics of Manipulation and Deception*. Princeton: Princeton University Press
- Böhm-Bawerk, Eugen, (1890/original 1884), *Capital and Interest: A Critical History of Economical Theory*. London: Macmillan
- Foroohar, Rana, (2016), *Makers and Takers - The Rise of Finance and the Fall of American Business*. New York: Crown.
- Franklin, Benjamin, (1748), “Advice to a Young Tradesman, [21 July],” (<http://founders.archives.gov/documents/Franklin/01-03-02-0130> [last update: 2016-03-28]).
- Gordon, Robert J., (2016), *The Rise and Fall of American Growth*. Princeton: Princeton University Press.
- Hayek, Friedrich (1944), *The Road to Serfdom*. London: Routledge Press
- Kant, Immanuel, (1781), *Kritik der reinen Vernunft*. Riga
- Kuhn, Thomas, (1962), *The Structure of Scientific Revolutions*. Chicago: Chicago University Press.
- Langholm, Odd, (1979). *Price and Value in the Aristotelian Tradition – A study in scholastic sources*. Oxford: Oxford University Press.
- Langholm, Odd (1984), *The Aristotelian analysis of usury*. Oslo: Universitetsforlaget
- Langholm, Odd, (1992), *Economics in the medieval schools – Wealth, exchange, value, money and usury according to the Paris theological tradition*. Leiden: Brill.
- Langholm, Odd, (1998). *The Legacy of Scholasticism in Economic Thought – Antecedents of Choice and Power*. Cambridge: Cambridge University Press.
- McCloskey, Diedre N., (2006). *The Bourgeois Virtues : Ethics for an Age of Commerce*. Chicago: University of Chicago Press.
- McCloskey, Diedre N., (2010). *Bourgeois Dignity; Why Economics Can't Explain the Modern World*. Chicago: University of Chicago Press.
- McCloskey, Deirdre N., (2016), *Bourgeois Equality – How ideas, not capital or institutions transformed the world*. Chicago: Chicago University Press.
- Merton, Robert K., (1968, enlarged edition), *Social Theory and Social Structure*. New York: Free Press.
- Mirowski, Philip, (2013). *Never let a serious crisis go to waste: How Neoliberalism survived the financial meltdown*. London:Verso
- Noonan, John T., (1957), *The Scholastic Analysis of Usury*. Cambridge. Mass.: Harvard University Press
- Schumpeter, Joseph A. (1954). *History of economic analysis*. London: Allen & Unwin.