

ON MONEY

A Translation of
DELLA MONETA
by
FERDINANDO GALIANI

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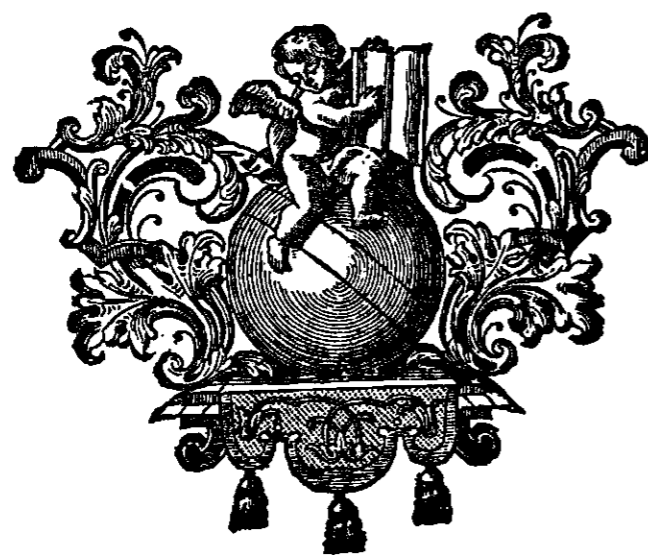
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DELLA
MONETA

LIBRI CINQUE.



IN NAPOLI MDCCL.

PRESSO GIUSEPPE RAIMONDI
CON LICENZA DE' SUPERIORI, E PRIVILEGIO.

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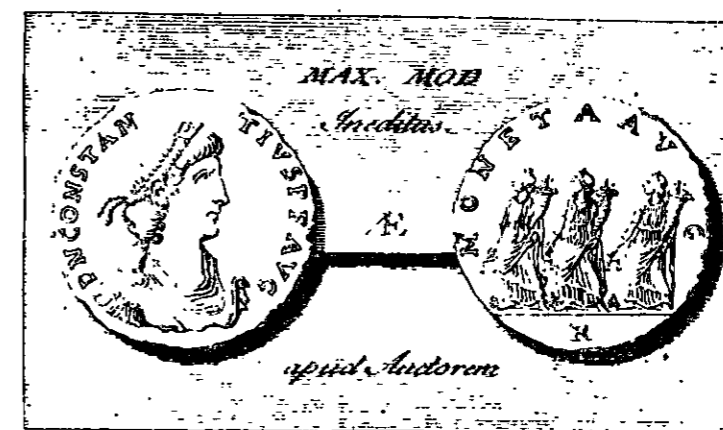
DELLA
MONETA

LIBRI CINQUE

DI

FERDINANDO GALIANI

EDIZIONE SECONDA.



IN NAPOLI MDCCLXXX

NELLA STAMPERIA SIMONIANA

Con licenza de' Superiori.

Courtesy of Columbia University

BOOK I

OF THE METALS

INTRODUCTION

I have committed myself to the completion of a work which, insofar as my powers and gifts allow, will illustrate the nature and qualities of money, or of the metals, which learned peoples have used as an equivalent of all other things exchanged.⁴⁻¹ This is worthy of more careful study and thorough understanding than it normally receives, not only because of its great utility, but also for the great mystery which still surrounds it, especially for persons entrusted with the responsibility of governing others.

I shall begin by showing that all men have generally used the metals -- principally gold and silver -- as money; whence the value of the metals arises; that this originates, is determined and regulated neither by whimsey, nor by edicts of princes, and that money draws its value from the value of the metals.⁴⁻² I shall then proceed to explain the nature of money and the effects of augmenting and diminishing it⁴⁻³ -- effects which are so reknowned yet so mysterious -- and its necessity, circulation,⁴⁻⁴ and ingenious representation in the public interest by paper. I will then discuss, finally, interest, agio, and foreign exchange -- all ideas which are so obscure -- along with the principles of the concealed order which regulates and animates them.

Whether my efforts will suffice for so vast an idea is not for me to say; this remains for my readers to judge. I am certain, however, that although love of the public's welfare alone inspires me in writing, I would not wish to be denied the helping hand of Providence, always so ready to lend itself to such virtuous enterprises. This is all I will have need of in so arduous a journey.¹⁻³

CHAPTER 1

*OF THE DISCOVERY OF GOLD AND SILVER AND OF TRADE IN THE METALS.
HOW AND WHEN THEY BEGAN TO BE USED AS MONEY.
OF INCREASING AND DECREASING THE QUANTITY OF MONEY.
THE PRESENT STATE OF MONEY.*

In all nations which avail themselves of its use, money consists of three metals. One is of a high value, another of a middling value, and a third of a low value. Without exception, gold and silver are used for the first and second ranks of value, but the metal used for money of the lowest rank has differed from century to century. Today, Europe uses copper for this purpose, as the ancients did; the Romans sometimes even used yellow copper²⁻¹ or brass, and bronze. Lead coins, surely ancient in origin, have also existed and, in Caesar's time, iron money was used in both Greece and Great Britain.²⁻² In our own day, finally, many use a mixture of two metals for small coins.

In addition to these, there is no lack of nations which use not metals but such things as: bitter almonds, as in Cambay;⁴⁻¹ cocoa and corn, as in some parts of America; or salt, as in Abyssinia; and shells. One may properly ask whether these are indeed money. But such a discussion would be over words and not things. Accordingly, I will turn directly to gold and silver, beginning with their discovery and ancient use, devoting little attention to other metals.

*Discovery of
the metals.*

Philosophers have long speculated over the many possible means by which knowledge of the metals might first have been acquired by man. The explanation which seems most plausible to me is that the first metals to become well-known were surely iron and copper, for these are found in ample quantities, in shallow veins which are not difficult to locate. Such ore is often found in

great bulk and is usually of almost pure metal. Sheer wonder, the mother of experience and of curious inquiry, probably first led men of the earliest ages to draw these bodies of stone and earth up to fire and -- upon seeing them run to the ground, molten and liquified -- to understand their nature for the first time. Only then was curiosity, which is greater in proportion to the intensity of man's needs and his ignorance of the properties of such bodies, able to lead him to such knowledge. Indeed, curiosity may well be the cause of the discovery of all great things.

Alternatively, not yet able to distinguish the mass of metals from ordinary stones, man might first have hurled them into flames in order to economize on and to enjoy a greater use from wood, finding them liquefied, to his utter amazement.²⁻³ Or, finally, the eruption of volcanos, which have sometimes poured forth liquefied metals, might first have instructed man in the art of melting the metals down and fashioning them according to his wishes.²⁻⁴ Nations usually referred to in ancient fables and in history as those which worked the metals might be none other than the nations in which naturally volcanic fires formerly burned.

But minute fragments of gold and silver, many strands of which are imperceptibly scattered among the hardest stones, are mixed in with sand. Such metals could not have revealed that they could be converted into a liquid form by the application of heat, and later hardened, and, what is more, that they would be malleable -- except for man's discovery of other metals, through which he first learned of the qualities of this class of bodies.²⁻⁵ I believe this is why men first gathered these metals from the sands of the rivers, many of which carry gold out to the sea, from every part of the world. Reasoning, then, that these particles first arose in the mountains²⁻⁶ and were later carried from there to the sea, they themselves began digging up gold in the mountains, taking it directly from its natural veins. There, also, they recovered silver, which is always its companion.

Their earliest use.

Thus discovered, the remarkable beauty and splendor of the metals rendered them agreeable to men, who, in ancient times, had already begun to think of them in this way. We know this because we can observe that savages and Indians still think of them in this way today. Indeed, there is no easier way to discover the validity of events of centuries now remote than by observing the present customs of uncivilized and distant peoples. That is to say, spatial differences have the

same effect on man as do differences of time. One can, therefore, truly affirm that all the ages since the time of the flood still exist in the present century; these may be found to repeat themselves in the customs of distant peoples.

There is no nation in which these metals are available today, however barbarian, in which women, children, and men are not most eager to adorn their persons, or even their coarse ornaments -- when they have any -- with gold and silver. The same may be said of earliest man. Everywhere in America, even before its discovery, when money was not used, gold and silver were esteemed over all other things and venerated as sacred and divine.²⁻⁷ They were only used for the worship of some god and for the adornment of their princes and nobility. Moreover, as we know from the *Pentateuch*⁴⁻² and the *Poems of Homer*,⁴⁻³ two ancient books still extant, these metals were also held in high esteem and put to the same use in those days. One finds in Homer,⁴⁻⁴ for instance, that all ducal military ornaments were garnished with gold and silver and frequently also bestudded with the same metals.⁴⁻⁵

In such works, silver is discussed considerably less frequently than gold.²⁻⁸ This indicates to me that even in those days it was recognized that the scarcity and value of silver were equal to that of gold, and sometimes even greater. This might seem extraordinary. But, on reflection, it is obvious that it could not have been otherwise. For, of all the metals mixed in with the rivers' sands, none is more plentiful than gold. Silver, for example, is never found there. Is it surprising, therefore, that the greater part of the yield is found in sand, of all places, even among the most cultivated peoples; or that this is the easiest of all means of mining; and that it should yield less silver than gold? Since this is still true today, among barbarians, for example, it must follow that in ancient times gold was known before silver.²⁻⁹ The sword which King Alcinous forced Euryalus to present to the injured Ulysses, whom he had assailed, was of great value because of its silver studded hilt.⁴⁻⁶

Earliest European and Asian traffic in the metals.

While the Greeks were still uncultivated, Asia and Egypt, which abounded in great riches, had adopted more cultivated customs. Solomon, who opened the doors of trade with the Orient to the Hebrews, whom he made mercantile, drew immense wealth to Jerusalem, with his ships from Ofir⁴⁻⁷ and Tarsis,¹ which I believe to be

¹ Even in our day the richest African mines, which are on the coast of

on the eastern coasts of Africa and Spain, respectively. The Phoenicians and Thyrrhenians, thus placed on soil which was sterile but replete with safe ports, soon wrested dominion over the sea from all others and turned exclusively to trade.²⁻¹⁰ They were the first to provide Greece and Asia Minor with copious amounts of gold and silver, and to introduce them gradually to the use of coins. Having first filled Sicily, Spain, and Africa -- all countries abundantly rich in mines -- with colonies, they took gold from them and soon began to export it to Greece, there to trade it for other things.²⁻¹¹

From such exchange, it must soon have become evident that since the value of the metal was always the same, it should be regulated by weight alone: that is, by quantity.²⁻¹² Since the amount mined was also always the same, the demand general, and the quality never different; since the arts of alloying were not yet known; and since, in the crudeness of the times, no attention was given to small natural differences in fineness -- it followed that these people, who gathered and traded the metals, had to establish for their greater convenience, certain weights and measures, according to which to set the value of the metal.²⁻¹³ This could not always be imitated by other nations which produced such things as wine, grain, and oil, (merchandise as rare and particular to some countries in those days²⁻¹⁴ as are today cinnamon, cocoa, and spices) because of constantly varying differences in the quality of such things. Neither was it difficult for the public authority to begin to imprint these pieces of metal with some sign since, for the purposes of trade, the metals were already being divided into correctly weighted quantities.

This is the natural and true introduction of coins and money. It is also the reason why Herodotus⁴⁻⁸ attributed the invention of coins to the Lydians⁴⁻⁹ who collected a great deal of gold from their rivers,⁴⁻¹⁰ some of which they made available to the Thyrrhenians and Phoenicians who, in turn, carried it to other regions. Coins, thus, came to acquire the universal acceptability which makes them money.⁴⁻¹¹ Narration of these events, which comprises all of the mythology and sacred fables of Greece, can truly be said to be a confused history of the first navigation and commerce undertaken in the Mediterranean, as well as of the wars and plunders which took place in order to improve future trade.

Sofala, are referred to as from Ophur. I do not know whether this has been reported by others.

I find no other distinction between the centuries of antiquity¹⁻⁴ and our own but that which runs from the great to the small. What was then Oceanus is known today as the Mediterranean;⁴⁻¹² the world was then thought to consist of those lands²⁻¹⁵ whose shores were washed by the Mediterranean; Spain; which I believe was at that time the famous Atlantis, so celebrated by Egyptian priests, corresponds to our America; the Black Sea and Colchis, to what is now called Guinea; and the Hellespont and Thrace, to India; the Thyrrhenians, Sidonians, and Carthaginians were then nations which are now the maritime powers²⁻¹⁶ and trading republics of our day. Finally, Egypt and the Babylonian Empire correspond to those of our great monarchies which are in large part sustained by trading people. Though separated by time, moreover the same events of navigation and discovery -- those of Hercules and the Ulysses of yore -- match those of our Columbus and da Gama. Cattle, olives, and grains of the time, are today's coffee, tobacco, and spices, which have been taken from their native lands and transplanted abroad.²⁻¹⁷

First introduction of coins.

The metals, then, were exchanged by weight very soon after they began to be traded. If this did not take place among Americans²⁻¹⁸ it was only because such trade and transportation did not exist among them, involving as they did a considerable number of transactions.

Thus, it is difficult to determine the origin of money if a distinction is to be made between metal which has been measured or weighed, and coins.²⁻¹⁹ Silver shekels, for example, named in the time of Abraham, and golden talents were surely names of weights among the Greeks and Hebrews.²⁻²⁰ Note that this does not prove that money did not also exist at that time, as it did later. For though the *libbra*, or the *lira*, and the *uncia*⁴⁻¹³ are names of units of weight among us, the terms also have monetary uses. Should evidence be required that metals which were weighed were generally acceptable as true money,⁴⁻¹⁴ it may be affirmed with certainty that in the Trojan War⁴⁻¹⁵ gold and copper were already in use as money. Homer, for instance, was wont to say, with reference to men of wealth, that they were "rich in gold and copper," and "a great deal of gold and copper was hidden" in Ulysses' treasure. It was not strange for money to be referred to by the name of the metal of which it was made.²⁻²¹ For example, coins were called *aes* by the Romans, *χαλκός*⁴⁻¹⁶ by the Greeks, and *argent*⁴⁻¹⁷ by the French. Thus, the first money used in Greece was made of gold and copper. (The Greeks could not have used silver because of its

scarcity.) Talents and half-talents were their gold coins. Homer frequently referred to them as πέντα,⁴⁻¹⁸ which corresponds to our *guisto* and *trabboccante*.⁴⁻¹⁹ Money of account was otherwise referred to as βός,⁴⁻²⁰ which is the same as the word for ox, whether everything was valued in terms of oxen, or whether this was just a name for a coin, as I tend to believe. If it was a coin, it was surely a gold coin. For, we read in the twenty-third book of the *Iliad*,⁴⁻²¹ of a slave, who, though most skillful and industrious, was valued at no more than τεσσαράβοιον,⁴⁻²² or four βούς.⁴⁻²³ This means of valuation had apparently been in use for some time. For example, the widow of Polydorus, the king of Sparta, sold one of her houses valued in this manner. And yet, there is no lack of those who believe that this name was given to money because the coin was stamped with the image of an ox. This is an opinion I do not share; I am more inclined to believe that the first coins of this type, perhaps these very same talents, corresponded to the price of an ox, and that the ancient Greeks, and later the Saxons, valued money itself, in their laws, in terms of cattle. In due course, as the metal became more abundant, money ceased to correspond, in value, to cattle. This is probably why, by the time Homer wrote, that much celebrated εκατόμυνη⁴⁻²⁴ no longer stood for 100 oxen,²⁻²² but instead was the name of a sacrificial ceremony sometimes performed with goats and lambs.^{2-23, 1-5}

First references to coined money.

At the time of the Trojan War, the East had also begun to use money, but with a difference. According to records which have come down to us, silver money was adopted there before gold. Shekels were made of silver and the Hebrew word *Kesita*, which is found in Chapter 53 of *Genesis*,⁴⁻²⁵ is rendered by our *agnello*.⁴⁻²⁶ It is, therefore, even more probable that a silver coin was referred to in this manner because its ancient value was actually equivalent to the value of a sheep, and not because of the image imprinted upon the face of the coin.

Asiatics, who for the most part lived a pastoral life at that time, surely compared the prices of different things to the prices of their livestock.²⁻²⁴ I would be more confident of a history based on the vicissitudes of the money used in regions closer to us than of money used in the Orient. Consequently, I shall limit myself to the former, and shall assert that the origin of silver money in Greece is not known to me. I know that the mines of Carthage, the excavation of which began about the time of the new Carthage of Hannibal, were most abundantly endowed with silver. No less so

were those of Laurium, in Attica, which belonged to private Athenians. In more recent times, even these would be mined; but at the time of Darius,²⁻²⁵ silver had not been rendered so plentiful in Greece as to render it worth less than gold. This is known from accurate accounts of the offer which Herodotus made to the temple of Delphi. A large part of the history of silver has been drawn from translations of these priests, other parts come from fables. Phillip,⁴⁻²⁷ the king of Macedonia, is said to have kept a cup of gold which he regarded as a very rare thing, under his pillow as he slept; but in all of Greece, the Spartans could not find enough gold to gild a vault in the image of Apollo; Hieron, the first,⁴⁻²⁸ the king of Syracuse, was not able to obtain enough gold from which to fashion a statuette, except from Arciteles, the Corinthian. As I have already noted, such scarcity is excessive and wrong. In enumerating the wealth he saw in Delphi, Herodotus asserts that Croesus alone provided the oracle with one hundred seventeen bricks of gold.⁴⁻²⁹ Some of these were six inches⁴⁻³⁰ long, while others were of only three inches. All of them were an inch thick. Four were gold *di coppella*,⁴⁻³¹ each one weighing two and one-half talents, the others were all of white gold, or gold of just a few carats. Croesus also gave the oracle a pure golden lion worth ten talents; two cups, one of gold and the other of silver, the former weighing eight and one-half talents, the latter, possibly, six hundred amphorae,⁴⁻³² four large silver shells,⁴⁻³³ and other things. And to Anfiaro, his companion, he gave a crown⁴⁻³⁴ and a gold bar,⁴⁻³⁵ both of pure gold. These candid observations reveal the abundance, or, at least, the moderate quantity, of precious metals which existed at that time.

State of the precious metals and of coins following the days of Alexander.

Such mediocrity prevails to the times of Alexander. He opens wide the gates of the Persian Empire and those of the Indies.⁴⁻³⁶ As a result of the trade which followed in other channels he changed the whole appearance of the world. Vastly greater treasures poured forth not only into Greece, but also into Syria and Egypt. This is known by the magnificence of their funerals and, still more, by the coronation of Tolomeo Filadelfo⁴⁻³⁷ which people still read of with amazement and incredulity to this day. All of this wealth was eventually absorbed by Rome which swallowed it up forthwith. Poor to begin with, she grew slowly because of internal dissension which kept her oppressed. Over a long period of boorishness matched by the slothfulness of her princes, she slowly lost those virtues which she had cher-

ished for centuries.²⁻²⁶ The triumphs of Paulus Eme-
lius,⁴⁻³⁸ of Lucullus,⁴⁻³⁹ and of Pompey⁴⁻⁴⁰ consti-
tuted the deep pools of gold and silver in which Rome
had wallowed, and which had filled her with such riches,
which were certainly greater than any other city had
enjoyed up to the time of the discovery of India. What
is to be admired in these centuries as compared to ours?
In those days wealth was companion to arms and, there-
fore, followed the viscissitudes of war; today, wealth
follows the path of peace. Whereas at that time the
bravest of men were the richest, today the richest are
the most unwarlike and peaceful. The differences, there-
fore, arise from different attitudes toward war.

*State of
money in
Rome.*

To turn to something more specifically from Roman
monetary history, Rome at first had only a copper coin.
This had been coined by Servius Tullius⁴⁻⁴¹ and was
called a *pecunia*. Gold and silver coins were not un-
known to the Romans; these coins were not their own.
They had, instead, been acquired from neighboring Etrus-
cans, a powerful people and one which was not only cul-
tured but also industrious. Such coins were undoubtedly
of Oriental origin, for the first Etruscan silver coins
were not minted until 484, the year of their foundation.
The first gold coins did not follow until some sixty-
two years later. In the meantime, in the calamity which
the public experienced during the Punic Wars,⁴⁻⁴² the
price of copper had been subject to such great varia-
tion that the as, as copper of a given weight was then
called, had fallen to only one twenty-fourth its ancient
value. These are truly great changes, if matters were
actually as grave as indicated here. The intrinsic
value of commodities did not change as much as nominal
prices varied,⁴⁻⁴³ but the value of silver, relative to
that of copper, was greatly changed. After these changes
the Romans made few coins and these were adulterated in
goodness by the emperors succeeding Pertinace,⁴⁻⁴⁴ but
in no special order and following no particular principle.

In any event, because of changes in ancient customs
and because of the opinions generally held at that time
the Roman Empire began to decline from her position of
power and greatness. Step by step, the abundance of
gold and silver was also seen to decline. No longer
were the barbarians rebuffed with iron and superior
force; henceforth, gold and Roman tributes were to keep
them from setting foot on the soil of Rome. Spread
throughout the vast northern regions by this means,
these metals were thus dissipated and, hence, exhausted.
Their quantity was diminished even more following the
barbarian invasion, the ruin of the Empire, and the

subversion and pillage of the cities. A great deal of
metal, consequently, remained buried underground and
much of it was destroyed or dispersed, not to be re-
gained by trade which by this time had itself been
halted and was all but extinguished.²⁻²⁷ Therefore,
in the ninth and tenth centuries, following a period
of greatness, our provinces returned to the same state
of poverty and crudeness in which they had been in the
days of the flood. The dearth of gold became great
anew and, in consequence, the value of things appeared
at its lowest ebb.

*Its state in
the centuries
of the bar-
barians.*

This would not have occurred if the Roman practice
of raising money⁴⁻⁴⁵ had also been used to lower it.⁴⁻⁴⁶
But since they maintained a value indefinitely once they
raised it, the Romans forced prices of commodities to
fall once money resumed its decline. Out of this pov-
erty, government arrangements of this century grew, in-
cluding principally: feudal laws, vassalage, slavery,
fines, taxes, tithes, and similar institutions.²⁻²⁸
This is why sovereigns and landlords are not able to
extract excises today, except in the form of personal
services or directly in the form of the fruits of the
earth.

As men labored in this state, they heaped destruc-
tion and theft upon each other. By the fourteenth cen-
tury, they lived in a wretched state. Inevitably, when-
ever greed upsets orderly government, everyone becomes
impooverished; no one is enriched. When, on the other
hand, greed is restrained, the state is enriched, power
and happiness are augmented.²⁻²⁹ Fortunately, in the
fifteenth century, Europeans began to become more law-
abiding, even before the discovery of the Indies; and,
at the same time, gold and silver began to appear again
in greater quantities.²⁻³⁰

*The discovery
of the Indies
and its con-
sequences for
the metals.*

With the arrival of fourteen ninety-two Christopher
Columbus, of Genoa, sailing in Spanish bottoms, discov-
ered new India;⁴⁻⁴⁷ the Portuguese began to trade along
the coasts of Guinea and Oro. With the consequent
opening of new routes, Europe began to acquire vast
amounts of gold and silver. Indeed, in just a few
years, all of the precious metals which it had taken
the Indians centuries to accumulate were taken from
America. The human mind can scarcely imagine how vast
a quantity this is. It was then, as the field was
opened to the industry of subjects and the greed of
princes, that all hoped to be able to enrich themselves
without impoverishing others. Moreover, men's minds
turned to thoughts of peace. They began to employ
treasures formerly spent for arms and destroyed in war:

for the erection of ships and the establishment of colonies, for the construction of ports and fortresses, and for the creation of roads and warehouses. People who had first cast their lot with war now turned with unbelievable zeal to the sea, to exploration, and to discovery and conquest.

For Europe, already rendered bountiful by commerce, by trading companies, and by industry, this meant peace, humanity, improvement in the arts, luxury, and magnificence -- filling her with happiness and wealth. But for the innocent Indians, it meant nothing but plunder, servitude, slaughter, and desolation. The barbarian use of slaves spread among us, as the Indians and African Negroes became our slaves and were treated, perhaps, more cruelly than others had treated them. Surely, whoever considers it seriously, will discover that no people can enrich itself without rendering some other people poor and unhappy. Just as Roman conquests had rendered Italy prosperous, we too enriched ourselves on the misery of others,²⁻³¹ though we did not consider ourselves conquerors.²⁻³¹ Because a great distance protected us from the unsightly calamities which victims of our luxury suffered in America, it was easy for us to persuade ourselves that industry and trade had innocently brought us this gain.²⁻³² Virtually all the riches India provided first fell to Spain. Soon Portugal was added, but the calamities which soon befell the latter caused her to move on to other things. Nonetheless, the quantity of treasure to be had was so great, the value of all goods so increased, that the mines of India would not have been worked anymore for additional precious metals, were it not that a wide gulf in the circulation of these metals was unexpectedly opened up.

Shortage of
the metals
in ancient
India.

Ancient India has always been more in need of gold than we have been, and even more of silver. Hence, our merchants have found it profitable to send it there. This was so at the time of Pliny, who tells us² "*indigna res, nullo anno minus H.S. quingentis³ imperii nostri exhauriente India.*"⁴⁻⁴⁸ Giovanni Villani says of gold that "because it was profitable, merchants gathered it up and carried it across the sea, where it was more in demand."⁴

In the notes of Uberto Benvoglianti in the *Cronaca Senese* of Andrea Dei, in the year 1338, we find the com-

²Lib. 6. c. 23.

³This sum corresponds to one million two hundred fifty thousand ducats.

⁴Lib. 12. c. 96.

mercial records of Soria kept by Benuccio di Giovanni Salimbeni, chamberlain of Siena, a man of great wealth in those days, in these words:

In the year following 1338, the said Benuccio had accumulated a large quantity of silver and copper. Inasmuch as it had become customary for the great merchants of Soria to trade at the port of Ercole with quantities of silken goods, all was bought by the said Benuccio and paid for with silver and copper.⁵

The total value of this trade comes to 130 thousand gold florins. This is a curious thing to read, one worthy of some thought when one notes how great a quantity of money was absorbed by the Orient. But, because this trade was carried on partly by land, among hostile and rapacious people, it was not popular,⁴⁻⁴⁹ and was carried on only by Italians. In the year 1497, Vasco da Gama, of Portugal, rounded the Cape of Good Hope, discovered only a short time earlier by Bartolomeo Diaz. Upon reaching the Orient, da Gama opened up a trade with all these regions, to all of Europe, by his example and as a result of his conquests -- a trade which was, at the same time, easier and faster. Barren of silver, India soon absorbed the excess which would have stagnated in Europe. As a result, the value of the metals among us did not vary in the same proportion to the quantity arriving from America, but by much less. For, since the laws governing the movement of money are similar to the laws of flowing water, the greater the land area over which money is spread, the smaller the quantity per unit part, and the lower the value of money.

Present cir-
culation of
the precious
metals.

This state of affairs continues to prevail to this day. New India⁴⁻⁵⁰ sends us metals much of which we squander on luxuries, while a small part is used to increase the quantity of money, the value of which is constantly falling albeit, by insensible degrees. Much is retained for use in industry and in the arts. The rest is sent to Old India, where it is traded for many of the comforts of life, including: spices, cloth, linens, dye-stuffs, ivory, gems,²⁻³³ china, and above all, coffee, tea and medicines. Many people must deplore this use of the precious metals as a loss of wealth, which our minds so readily, though erringly,

⁵Murat. Rar. It. Script., T. XV.

believed to be an absolute matter.⁴⁻⁵¹ It is not. In fact, it is a proportion derived from differences in plenty. It is also easy to understand that if gold and silver were not put to this use,²⁻³⁴ these metals would no longer be regarded as wealth. And if they existed among us in an abundance equal to that of copper, then they would be of an equal value. Note how reasonable and wise men are. After first providing themselves with gold and silver sufficient for use in trade and for making jewelry, they would then give the rest to those people most in need of it,²⁻³⁵ and make it into other goods. He who would know more about human behavior, when the conduct of entire nations is considered, would take less for granted and be a good deal slower to propose corrections!

Effects which the quantity of the metals have on reducing the working of the mines.

Mines in America are incomparably more rich than those of Europe,²⁻³⁶ that is, greater quantities of metal are obtained with equal work. As a result, European mines are little worked or not worked at all. Indeed, if less of the metals were wasted, much less mining would have to be done -- even in America. We must note, consequently, that as the quantity of the metals increases, the number of mines likely to be worked diminishes. Moreover, it is not enough for a country to be endowed with a great many metal mines, it is also necessary that the mines be profitable enough to be worked. Since gold and silver are generally deposited in small quantities, in strata of rocks which are difficult to work and almost always alloyed with other metals, as well as with impurities, mining them requires a good deal of labor and great expense. This might be because of the deadly air in the mines (in which all the mining is done by Negroes acquired at a great cost) or because of the quicksilver poured over the ore. Nor is every vein equally rich, either absolutely or in comparison with others. For example, if a hundred years ago there were two-hundred veins of silver in the Cordillera⁴⁻⁵², producing five ounces of pure silver per cassone (a volume of fifty quintali or five thousand pounds of ore), two ounces would be eaten up by expenses, leaving only three as profit for the proprietor. Today, because there is no profit in any of these mines, they can no longer be worked. For though the amount of silver has been doubled, because it has been reduced in value by half,²⁻³⁷ the cost of the labor of one cassone is equal to five ounces of silver.

This is the real reason why French academicians of science who went to an area near the Equator in order

to measure the degrees meridian there, found the mines everywhere abandoned and in a state of decadence. This was especially true on the Continent and in the northern part of Peru, where the mines were generally not as rich as they were in the south, as in Potosí, in la Plata, and in Chile. They also found many places in which ruined and fallen buildings revealed clear signs of ancient labors. In addition, the scientists found, in Quito, a great horror and loathing for this type of work. There, all those who undertook it were now taken for mad, as those who did not apply themselves to it were regarded not very long before. The scientists incorrectly attributed this attitude to laziness and stupidity. On the contrary. I believe this attitude is a sign, an omen, that the people of these regions wished to abandon mining, which was de-populating and destroying them, in order to live a better life. Indeed, these people regarded us as the barbarians.

Natural balance in which the value of the precious metals should be kept.

Many writers fear that one day gold and silver will be as plentiful as copper. Such a fear is ill founded. For this can only occur if gold and silver mines as rich as copper and iron mines are found, and this does not appear to conform to the natural order of things: the richest gold and silver mines yield only twelve to fourteen ounces per cassone! There is likewise no need to heed suggestions that certain veins have at times yielded us as much as one hundred ounces for a period of time.²⁻³⁸ Such yields are quite rare. Nor need there be any fear, moreover, that the metals will become redundant as luxury is reduced, either by customs or by the power of law. In such a case, a smaller quantity would be extracted from the earth and, as a result, approximately the same scarcity would continue to prevail. In other words, nature places limits on things which are never either surpassed or exceeded, but which perpetually repeat themselves.

Reflections on the value of ancient coins.

This, then, is a brief discussion of the various circumstances to which money has been exposed. It only remains for me to comment on the value of the coins which have always been in use. The extent to which great intellects have toiled over this laborious task is unbelievable. Erudite humanists have labored especially hard to understand ancient works on money by the Greeks and Romans. Budeo, Gronovio, and Seldeno, for instance, have distinguished themselves above all others. It is, nonetheless, amazing and barely credible that so many great intellects have failed to perceive how uselessly they have dissipated their time and efforts.

It is one thing to know how much ancient coins weigh,

their weight is easily discovered from the many ancient coins we have preserved, but quite another to determine how much they are worth. Value, on the other hand, is a comparison of money with other things,⁴⁻⁵³ and since all other things are valued by money, money is therefore measured by these things. This measure varies not only from century to century, but virtually from year to year. For example, the same as weighing one ounce had a different value in the early years of the First Punic Wars⁴⁻⁵⁴ than in Caesar's time,⁴⁻⁵⁵ because in the Punic Wars one could buy with an as what Caesar's soldiers could barely buy with four times that much in their day. Likewise, in more recent centuries, a Florentine gold florin has always weighed one dram (or an eighth part of an ounce of pure gold). Yet, the thousand florins Giovanni Villani⁴⁻⁵⁶ refers to are quite a different thing than a thousand of today's florins, insofar as value is concerned. How ridiculous, therefore, are modern historians, who believe they have rendered the state of things as intelligible to their readers as they were in the minds of contemporaries, by reducing talents and ancient sesterzi to French livre, or to our ducats, according to weight. Indeed, these data are good for providing an approximate idea of the value of money. But it would be more useful, for these purposes for the reader to examine a good discussion of ancient customs. True, historians — virtually satisfied to have evaluated prices with the money of their time — have felt no necessity to record, for posterity, the value of grain or wine, or of wages in their time, though they have sometimes also, inadvertently, left us these as well. It is necessary, nonetheless, that these sparse records be gathered studiously. Muratori's twenty-eighth dissertation, *Antiquitates italicæ*, contains some discussion of the living customs of the people of ancient Parma, Piacenza, and Modena. Surely, these customs render the historical record better than the weight of coins.²⁻³⁹ I would not be content just to know the weight and the presumed value of ancient coins, or even of new ones. I beg my readers to revert always to the value of goods; the true value of money will in this manner be revealed.^{4-57, 2-40}

CHAPTER 2

STATEMENT OF THE PRINCIPLES FROM WHICH THE VALUE OF ALL THINGS ARISES.
OF UTILITY AND SCARCITY, THE ESTABLISHED PRINCIPLES OF VALUE.
REPLY TO MANY OBJECTIONS.

Different opinions concerning the natural value of the metals.

The acquisition of gold and silver, of which the most precious money is made, has always been — and is now — the ultimate goal of the multitudes. At the same time, it is the source of loathing and contempt for those who arrogate to themselves the venerable name of sage. Of these contrary opinions the first is often base and sometimes poorly controlled; the second is generally unjust or not very sincere. Moreover, since those who are interested in accumulating the metals usually overvalue them, while their detractors tend to undervalue them, none value them legitimately and reasonably. Many regard the prices of the metals as purely arbitrary and imaginary. These persons believe such prices arise out of common error and are passed on to us along with our education. Describing price in derogatory terms, such people refer to it variously as folly, fraud, or madness; they regard price as unreal. Others, more discreetly, believe that the common consensus of men has caused them, for their greater convenience, to adopt the common use of money, for the first time giving the metals a value they do not intrinsically possess. Few understand that the just price and value of the metals has been fixed and firmly established by their very nature and by the disposition of human minds. Under these circumstances, the reader will have to decide for himself where the truth resides before continuing. He must bear in mind that in each step in the discussion of extrinsic value, the augmentation of the value of money, interest, exchange, and the proportions of money — reference is always made to

Sentiments of
Aristotle.

an intrinsic, certain, and natural value.⁴⁻¹
Aristotle, a great genius and a man of wonder, has laid bare many fine considerations concerning the nature of money as, for example, in *Customs*, Chapter Seven, Book Five where he has written as follows:

τὸ νόμισμα γέγρονε κατὰ συνθήκην, καὶ
διὰ τοῦτο τούνομα ἔχει νόμισμα, ὅτι οὐ
φύσει, ἀλλὰ νομῶ ἔστι, καὶ ἐφ' ἡμῖν
μεταβάλλειν, καὶ ποιῆσαι ἄχρησον:⁴⁻²
*Ex convento successit nummus, atque
ob hanc causam νόμισμα vocabitur (a
Graecis) nempe a lege, quia non natura,
sed lege valeat, sitque in nostra
potestate eum immutare, inutilemque
reddere.*⁴⁻³

This is repeated in Chapter Six, Book One of *Politics*. If this philosopher has ever heeded in his teachings more than is appropriate, it would be in this matter, to our detriment. Following his master, Bishop Covarruvias, for example, proceeds in this manner:

*Si non natura ipsa, sed a Principe valorem numismata accipiunt, & ab ipso legem revocante inutilia effici possunt, profecto non tanti estimatur materia ipsa auri vel argenti, quantum numus ipse; cum si tanti estimaretur natura ipsa non lege praetium haberet.*⁴⁻⁴

Aristotelians, which includes Moralists and Jurisconsults, reason in the same way. It is obvious how correct such conclusions are. Given the truth of such a principle, I should not wish any to have to demonstrate by direct experience just how fatal and productive of grief such considerations can be. These opinions cannot be contradicted without destroying their very basis. Hence, I do not know, or even begin to understand, how it could be possible that such writers as John Locke, Davanzati,⁴⁻⁵ Broggia,⁴⁻⁶ the authors respectively of the works *Sul commercio*⁴⁻⁷ and of *Dello spirito delle leggi*,⁴⁻⁸ among others, could have had contrary sentiments so firmly established on so false a foundation, without ever denying the first principle. They were not aware either of the weakness of the latter or the instability of the former. For this reason, I myself, more than all others, have done my utmost to show -- with every study I have made -- what I have

long believed. Namely, that not only the metals comprising money but every other worldly thing, barring none, has its natural value derived from certain, general, and invariant principles;⁴⁻⁹ that neither whimsy, law, nor princes, nor anything else can violate these principles and their effects.⁴⁻¹⁰ Finally, concerning value, the Scholastics have said: *passive se habent.*⁴⁻¹¹

Any ediface built on these foundations will be durable and everlasting. I trust my readers will pardon any verbosity here, given the importance of the subject. It would be wrong to consider me responsible for so great a truth, should any be inclined to do so; the responsibility belongs instead to the infinite number of writers who have either failed to understand, or have not wished to demonstrate it.

Definition
of value.

The value of things, in general, is defined by many as the esteem which men have for such things. Perhaps, these words do not evoke an idea which is as clear or as distinct as it might be.²⁻¹ One might say that *esteem or value, as conceived by an individual, is an idea of proportion between the possession of one thing and another.*⁴⁻¹² If we say that ten bushels⁴⁻¹³ of grain are worth as much as a cask of wine, we are expressing a proportion of equality between possession of one thing and the other. It follows that because men are always most careful not to be defrauded of their own pleasures, one thing exchanges for another, and, consequently, equality involves neither loss nor fraud.

Differences
in value are
a consequence
of such a
definition.

It can be seen from what I have said that the value of things varies as men's ideas and needs vary. Since some things are more generally enjoyed and demanded than others, they have a value which is called current;⁴⁻¹⁴ other things have a value only because of the desire of those who wish to have them and those who can provide them.

The ratios
which two
values
include.

Value, then, is a ratio which is, in turn, composed of two other ratios expressed by the names *utility* and *scarcity.*⁴⁻¹⁵ Allow me to explain my understanding of value with some examples, in order to avoid any confusion over words. Obviously, air and water, which are the most useful things for human life, have no value at all, because they are not scarce. A small bag of sand from the shores of Japan, on the other hand, would be a rare thing, but since it has no particular utility, it would also have no value.²⁻²

Some will wonder what great utility one would possibly find in many things which have very high prices. This is a natural and frequently asked question which makes men appear foolish and irrational. It also des-

troys the basis on which the science of money rests. It will, therefore, be necessary to explore the utility of things and its measurement in more general terms. If utility does not depend on principles which are certain, then there can be no principles on which the prices of things are based either. Where there is no certainty or any means of demonstrating it, there is no science.⁴⁻¹⁶

True explanation of utility.

Utility is the ability a thing has to provide us with happiness. Man is a mixture of passions which move him with unequal force. Pleasure consists of gratifying these passions; and happiness is the acquisition of pleasure. But, I am not an Epicurean, and do not wish to appear to be one; permit me, therefore, to elaborate on some points in the argument introduced which must be refuted.

The gratification of a passion which stimulates and arouses another passion is not a true pleasure. Indeed, if the trouble caused by it is greater than the pleasure itself, then the pleasure should be abhorred as a true pain and an evil.²⁻³ If the pain is less than the pleasure, however, it is a benefit, though reduced in intensity and duration. This view, therefore, considers the pleasures of this life without reference to the other, eternal life, as though one and the other could possibly be considered with the same admiration. It is obvious to us, thanks to Providence, that after this life we shall live another, the pleasures and pains of which are closely connected with our behavior in the present life. Now, without altering anything I have just said, note that true and perfect pleasures are pleasures which produce no pain in that life. Those pleasures which produce pain in that life are always false and deceitful pleasures, since the difference between the pleasures and pains of this life and that is infinite, however large the enjoyment of this and small the pain of that might be. Had this assertion been made by all concerned the ancient dispute between Epicureans and Stoics -- that is, between delight and virtue -- could not have arisen. Either the Stoics would have been totally incorrect in their view or it would have been clear that the differences between the two are simply verbal differences.

To return to where I left off, utility is anything which produces a true pleasure, something which gratifies the excitement of the passions. Our passions are not just the desires to eat, drink, and sleep, however these are just the first or primary passions. Once satisfied, these give rise to others which are just as

strong. For man is so constituted that once he has satisfied one desire, another springs up in its place, always exciting him with an intensity equal to the first. He is, therefore, perpetually agitated in this manner, never quite succeeding in the achievement of full gratification. For this reason, it is incorrect to say that the only things which are useful are those which are required for the primary needs of life. Nor can any limits or frontiers be found between things we need and things we do not need. It is an ultimate truth that just as a thing is attained and, consequently, as soon as one ceases to need it, a person begins to crave something else.

The most useful things according to the means by which men acquire them.

Once man has satisfied the passions which appear in the human mind, passions which he holds in common with beasts²⁻⁴ and which are needed for survival of the individual and of the species,⁴⁻¹⁷ then nothing moves him more vehemently or more strongly than the desire to distinguish himself from others, and to be superior to them. This is prior even to self-love; it is the very source of action in us, and surpasses every other passion. Those things which are of use to, and which satisfy us, have the greatest value, superceding every other pleasure and, often, the security of life itself. Men seek food when they have none with the same justification as they seek titles of nobility, once they have been provided with food.²⁻⁵ Life is miserable and sad when we are hungry, but it can be just as miserable and sad when we are not held in high esteem or noticed. Indeed, sometimes the latter unhappiness is so much greater that we are more disposed to die or to place ourselves in a situation in which we risk the loss of life itself, than to go on living unhappily without the respect of others.

What is more just, therefore, than to acquire something of great utility, even with great privation and labor, as long as it produces a great many pleasures? If the feeling of pleasure derived from the reverence and high esteem in which others hold us should be ridiculed, this would constitute a reproach against our nature, which has provided us with a disposition of mind which we could not otherwise have acquired for ourselves, and which -- like hunger, thirst, and the need for sleep -- we neither should nor can defend or explain to anyone.

Some philosophers are contemptuous of riches and of the esteem of others; such philosophers have also trampled dignity underfoot. They are not honest when they say they hold such a position because these things

bring them no pleasure! They have only spoken and behaved in this manner because of the security they were already enjoying, the security of knowing that they were enthusiastically applauded and commended by the public, even after they had revealed their contempt for public acclaim.¹

Man's pursuit of magnificence.

The things which bring us respect are, therefore, deservedly valued most highly. Among those most often cited are dignity, titles, honors, nobility, and the power to command. Close behind these is a variety of things which have at all times been sought after by men because of their beauty. Those who have had the good fortune to acquire these and to adorn their persons with them have been, at the same time, admired and envied. These are: gems, rare stones, certain skins, the most beautiful metals such as gold and silver, and certain works of art embodying both a great deal of effort and great beauty. According to some, these bodies, which add dignity to the awkward appearance of people, have also come to provide the superiority which is a source of the most considerable satisfaction, as I have already indicated. Hence, the value of such things is deservedly great. Indeed, even kings owe the greater part of the veneration of their subjects to the external magnificence which always surrounds them. Deprived of these trappings, kings would retain only powers and gifts of mind which they had formerly; they have come to realize that the reverence shown them has been greatly reduced in such circumstances. Consequently, those powers which possess less true force and authority seek to regulate, with more attention to external pomp, the ideas of men among whom the august and magnificent are often nothing more than exaggerated nonentities. This is formally called, with words taken from the Scholastics and very appropriately adopted, which mean, in effect, "id quod non est, neque nihil, neque aliquid."⁴⁻¹⁸

Women's desire for beauty; whether or not this is reasonable.

If the desire to make a good appearance generates in men affection for these fairest and most beautiful products of nature, then the more ardent desire to appear beautiful makes these bodies even more valuable to women and children. Women constitute half of the human race and exist only, or in large part, solely for our propagation and breeding.²⁻⁶ They do not have any other value and merit than the love they arouse in men. And

¹It is known that the "display" or "pomposity" of Diogenes was greater than that of Plato.

because this attribute is almost entirely derived from beauty, women have no greater duty than to appear attractive in the eyes of men. How useful they are as ornaments is attested to by common consensus. Hence, if the value of women arises from their amiableness, which is, in turn, enhanced by ornaments, it is reasonable to conclude that the value of ornaments must be great indeed.

The adornment of children.

As for children, they require the most tender care of parents. Men know of no other way to show this tender love than to make the object loved more desired and charming in their view.²⁻⁷ Thus, a man will not be moved to adorn his children except by the desire to satisfy a woman.

This is how it has come about that the most beautiful metals were first collected, with great difficulty, from the sands of the rivers and, later, from the very bowels of the earth. It is still true that nations which are known to be rich in these metals, such as Mexico and Peru, hold nothing -- except gems -- in higher esteem than gold and silver. And insofar as they hold such trifles as glass and steel in higher esteem, what I have just said would be confirmed, not denied. For it would be the beauty that results from our toil which enchants people. Inasmuch as the beauty of glass and crystal results from art rather than from nature, their value varies only insofar as nature varies their scarcity,⁴⁻¹⁹ which because it was unknown to the Americans cannot be regarded as a contradiction of what I have demonstrated.

Reply to some common objections on the disutility of many things which are held in high esteem.

The greater portion of mankind reasons, as does Bernardo Davanzati, that "A natural lamb is more noble than one of gold, but how much less is it valued?" I reply to him as follows. If a natural lamb were as rare as one of gold, its price would be higher than that of the golden lamb, to the degree that its utility and the necessity for it exceeded those of the golden lamb. Such people imagine that value is derived from one principle alone, and not from many which join together to form a compound reason. I hear others say, "A pound of bread is more useful than a pound of gold." To this I reply that this is a shameful paralogism derived from not knowing that "more useful" and "less useful" are relative terms, and that they are measured according to the different conditions of different people.⁴⁻²⁰ To a person who has neither bread nor wine, bread is surely the more useful; an examination of the facts of this case would confirm this assertion because one will not find anyone who would choose gold and forgo

bread to die of hunger. Those who dig in the mines, for example, never forget to eat and sleep. Nonetheless, there is nothing more useless than bread for one who is sated. In this case it makes sense for a person to satisfy other drives. The precious metals are the handmaidens of luxury, but only when the primary needs are already satisfied. It is for this reason, Davanzati asserts, that:

an egg worth half a grain of gold would have kept Count Ugolino from starving to death, even after ten days in his tower prison. All the gold in the world would not have matched it in value.

Davanzati badly confuses the difference in value between an egg to one who is not in danger of starving to death, and the needs of Count Ugolino. On what basis does he conclude that the count would not have paid even as much as a thousand grains of gold for the real egg? Though not aware of it, Davanzati himself provided evidence of this error a little later on when he said:

Though a mouse is a most loathsome creature, one was sold for two hundred florins in the siege of Casilino. And this was not actually dear, because the seller² died of hunger, while the buyer lived.

Note that he was agreed, thanks to heaven, at least in this instance, that dear and cheap are relative terms.

Why most useful things are not the most highly esteemed.

Some find it strange that precisely the most useful things have a low value, while the less useful have a great and excessive value.⁴⁻²¹ Such persons should be reminded that the world is well constituted just for our welfare. What amazing good fortune! In general, utility is never matched with scarcity. Indeed, the more the basic utility of a thing increases, the greater the abundance in which it is found: hence, its value cannot be great. Those things which are needed to sustain life are profusely distributed over the entire world;²⁻⁸ they either have no value at all or have value to a very moderate degree.⁴⁻²² Many draw false conclusions, regarding my purpose, from these considerations; some unjustly regard my judgement with con-

²Plin. lib. 8. c. 57. Front. lib. 4. c. 5. Valer. lib. 7. c. 6.

tempt. My desire to do good should rather evoke prayers to God, feelings of self abasement; such an intention should be blessed at every turn. But few do this.

The contempt of philosophers is tiresome.

Many philosophers may, perhaps, say to me that although the value of gems and their scarcity spring from the nature of humans, as I have already demonstrated, these concepts do not cease to seem to them as ridiculous and miserable madness. To whom I reply: I wonder whether they could ever find any other human thing which does not appear this way to them! Nothing is likely to divert them from this opinion. But I would like the good philosopher -- after he has rid himself of earthly deceptions and after having virtually dehumanized himself and has so raised himself above the others that he is able to laugh at us poor mortals and amuse himself -- when he has then separated himself from these ideas and returned down here to mix in society -- which will, of course, force the needs of life upon him -- I would like him to return as a common man and not as a philosopher. That smile, which healed his soul, while he was philosophizing, would disturb his work and also the work of others now that he must labor. It is better that these concepts remain locked in his mind. For as he understands and deplores -- together with his peers -- that man is not very much superior to brutes (which I concede), he will by attempting to improve them only make them worse. This is an impossible enterprise for him. If men are guided to perfect virtue by our divine religion, then our teachers are assisted by supernatural and divine power; if examples of the highest perfection are seen among us, these works come from heavenly grace and not from human nature. He who is thus armed comes to perfect us²⁻⁹ -- and well he can. For philosophy is not capable of doing this! We have seen Stoics, who have wished to render men perfectly virtuous, and have instead rendered them fiercely proud; others have wished to make them silent and contemplative but have, instead, made them gluttonous; those who would see them as poor, have brutalized them; and, finally, wishing to purge them of prejudice, Diogenes has ended by establishing an infamous race of dogs. But, alas, they have finally let us live in peace. They have left to the metals and precious stones the value they have, whatever it may be.

No longer, then, can Horace proclaim:

*Vel nos in mare proximum
Gemmae & lapides aurum & inutile
Summi materiem mali
mittamus.*⁴⁻²³

Since we have been able to advance, without suffering, by means of these otherwise useless bodies, from a primitive life in which we literally devoured each other to a civilized state in which we live peacefully, by trade, we need not return, in the name of wisdom, to the barbarism from which we have, by the grace of God, been happily delivered. The community of man can only improve its ideas within certain limits; attempts made to exceed these limits of the order of things will destroy and corrupt man.

Leaving these considerations aside, considerations spawned out of superficial and imperfect ideas, we conclude at once that those substances which enhance the respect of men, increase the beauty of women and the amiability of children are useful and deservedly precious. The important consequence that gold and silver had value as metals, before becoming money,⁴⁻²⁴ follows from this. I will treat this subject at greater length in the next chapter; here I have spoken of value in general and have explained what I understand utility to mean. I turn now to a discussion of scarcity.

What raritè
is. The
ratios com-
prising it.

Scarcity⁴⁻²⁵ refers to the proportion between the quantity of a thing and the use which is made of it. Use is not so much the destruction as the employment of a thing, where its employment by one person, and the satisfaction of his desires, precludes the satisfaction of another person's desires. Assume, for example, that one hundred paintings are offered for sale. If some gentleman should buy fifty of them, the paintings would become about twice as rare, not because they are consumed, but because they have been withdrawn from the market or, as some might say, they are no longer a part of trade. It is true, however, that the destruction of a thing raises its price more than its removal from trade. This is because its destruction completely eliminates all hope, while its removal preserves its value in accordance with the probability that the thing will be used and returned again to circulation and trade. This merits more serious consideration.

Quantity of
a thing.

Turning now to the discussion of quantity, two classes may be distinguished. For some things, quantity depends upon the different degrees of abundance with which nature provides them. For others, it depends on the different amounts of labor employed upon them. The first class is formed by a group of things which are reproduced after a short time and which are expended as they are consumed. This group consists of animals and of the fruits of the earth. With the same work, their harvest may be as much as eight or ten

times more than it was just a short time earlier, depending on differences in climate. Plenty, obviously, does not depend on human will but on the circumstances of climate and of the elements.²⁻¹⁰

Another class includes certain bodies such as minerals, stones, and marble, different amounts of which are scattered throughout the world,⁴⁻²⁶ though their total does not vary from year to year.⁴⁻²⁷ But the amount mined does vary according to our wishes. More of this class of bodies can be extracted from the earth as more people are put to work on them; thus, in order to determine the amount produced, one needs only compute the labor,²⁻¹¹ for the quantity of these things always corresponds to this labor.⁴⁻²⁸ Of course, I really do not believe that new metals and gems are not regenerated in their great natural laboratory, but their creation is very slow compared to their destruction and it is, therefore, not necessary to take this into account.

Labor.

I turn next to a discussion of labor.⁴⁻²⁹ This alone gives things value whether they are entirely works of art, such as paintings, sculptures, carvings, et cetera, or such things as minerals, stones, wild fruit trees,²⁻¹² and so on.⁴⁻³⁰ The quantity of the material in these bodies contributes to value in no other manner except that it increases or reduces work.⁴⁻³¹ Thus, should one inquire why gold is worth more than sand, despite the fact that gold and sand are found mixed together on the banks of many rivers, he should be reminded that he could easily fill his sack with sand in just a quarter of an hour, but that it would take him many years to gather the very scarce grains of gold.²⁻¹³

Its calcu-
lation.

One must keep three things in mind in connection with the calculation of labor:⁴⁻³² the number of people, or the population; time; and the different prices of those who work. I shall discuss first the number of people.

Certainly, no one works except to live, nor can one work without sustenance. For example, the work of fifty persons is needed for the manufacture of a bale of cloth, beginning with the clipped wool and continuing on through the state in which it is displayed at a shop. The cloth will be worth more than the wool it contains. Its price is equal to the cost of food for the fifty persons, for a time equal to the period of time involved in the work. For example, if twenty men are employed for an entire day, ten for half a day, and twenty for three days, the value of the cloth produced is equal to

enough food⁴⁻³³ to feed a man for eighty-five days. Twenty of these days will be earned by the first, five by the second, and sixty by the third. This obviously assumes that these persons all have equal compensation.⁴⁻³⁴ So much for population.

Time.

Time includes not only the period actually involved in the work but also the period during which a person is at rest, because he must eat even during that period. This is because the work of an individual is interrupted either by law or because of the very nature of the arts, and not simply by slothfulness of the individual. Laziness is not so general in a nation that it would have a significance equal to that of laws and customs. Similarly, feast days among those people who observe them without working, make things more costly than they would otherwise be. Consider, for example, a man who works 300 days in a year and produces 100 pairs of shoes. The value of the shoes must correspond to his subsistence for an entire year. Another man producing 120 pairs while working 360 days, will sell his product for one-fifth less, since it is not necessary for the latter to earn any greater wage, while producing 120 pairs of shoes, than the first man received for his 100 pairs.⁴⁻³⁵

When time is regarded as necessary in determining value and when it is not.

There are, in addition, some types of labor which cannot, by nature, exert themselves constantly. The fine arts belong to this group. I do not believe there is a sculptor or musician who works more than one hundred days a year. So much time is needed to determine where employment can be found, in order to get started, for travel, and so on. Therefore, their work is properly worth more.

Finally, I would add the diverse lengths of time it takes different men to begin to enjoy profit from their work. For this reason, those arts and studies²⁻¹⁴ which require a great deal of time and expense to master must be higher in price. These are no different than pine timber and some walnut trees which, because of the length of time they take to grow, are worth more than poplars and elms. So much for time.

Differences in prices of human labor and how they are caused.

A correct appraisal of the value of different human talents, from which various prices of labor result, is a more difficult matter. This concerns a question about which less is known. I will discuss my thoughts on it here without knowing whether others believe as I do, since I have not found any other writer who has discussed this matter. I would certainly be pleased if anyone who knows better, or simply just thinks differently, would refute any of my arguments with logic and candor.

I think the value of human talents²⁻¹⁵ is appraised by the same means as the value of inanimate things;²⁻¹⁶ that is, by the same principles of scarcity and utility considered together.⁴⁻³⁶ Different men are providentially disposed to different occupations at the time of birth. Although these are not equally scarce, they correspond to human needs with remarkable wisdom. For example, of a thousand men, six hundred are only fit for agriculture, three hundred inclined to the various manufacturing arts, fifty to the richer trades, and another fifty disposed to succeed in different studies and disciplines. Granting this, the worth of a man of letters compared to a peasant would be in inverse proportion to these figures, or as six hundred to fifty: he will be twelve times better. Consequently, it is not utility alone which determines prices. This is why the good Lord has willed that men who practice the most useful arts be born in large numbers. Since these are the very bread and wine of mankind, their value cannot be great. Learning and wisdom, on the other hand, are like gems among talents, and these deservedly have the highest prices.

Other reflections on the same subject.

Note, here, that scarcity should not be valued according to the proportions in which talents are provided, but instead in accordance with how rapidly different talents come to maturity. Consequently, the price of a talent is greater, the greater the difficulties of bringing it to a degree in which the talent is important and worthy of such a price. Great generals such as Prince Eugene or Marshall Turenne, command an unlimited price compared to a simple soldier. This is not so much because nature produces few men as able as these,²⁻¹⁷ as because wherever military victories are reported these same few men find themselves in the fortunate circumstance of being present, practicing their skills. Nature behaves here as it does in the case of seeds and plants. Almost anticipating a great loss between sowing the seed and harvesting the plants which finally blossom, nature provides a much greater quantity of seeds, depositing more of them into the earth than the number of plants which finally bloom. Or, a plant is worth more than the seed from which it springs.

Reflecting on these sound principles, one notes how brilliantly the wisdom of human judges gleams. Everything is valued in measure. Wealth does not fall to a person except as payment for the just value of his work, although he can give his wealth to a person who is not worthy of acquiring it. For example, no family exists, indeed, there is no man, who can boast of wealth which

has not been obtained either by merit or as a gift originally obtained on the basis of merit. Such a gift is referred to simply as a gift, when it is made in life, or as an inheritance, if given after death. But in either case, if one were to examine the early history of the wealth which someone might have received undeservedly, he would observe that it was originally acquired wholly on the basis of merit. Though it is true that, in this connection, it is often necessary to ignore scores of persons for long periods of time, reason will show that, in the end, even these exceptions will fit this group.²⁻¹⁸

Replies to
any objec-
tions.

Some would assert that merit, or virtue, often goes unrewarded -- that it is madness to deny the frequent existence of the most atrocious acts of injustice. But note the false reasoning here. First, there is no need to refer to some professions as synonymous with virtue or kindness, just because they may be scarce and acquired only with great difficulty; virtue or kindness may not be able to produce either true utility or true pleasure for the multitudes. Prices are made by the many, not by the few.

Second, bear in mind that since man is made up of virtues and vices taken together, there is no way of rewarding a man's virtues without at the same time also rewarding his vices, despite the fact that one will never find vice exalted by anyone. These defects only occasionally fail to get in his way; barring such defects, he would surely have achieved greater success.

Third, always bear in mind that possession of skill in obtaining employment is one matter. To know how to perform the duties of a position well is quite another. The first consists merely of the arts of being pleasing to persons responsible for filling the position, whether the position involved be military or civilian. On the other hand, the skills required to perform different employments are never the same, depending on the various needs of different offices. In any event, no one has ever acquired employment which he is not worthy of being able to secure.²⁻¹⁹ It would be well if, when the science of acquiring a position is not joined with the ability of filling it well, a person were held responsible for the consequences and regarded as undeserving of the position. Men regard as worthy only the ability to employ well the talents which one may have. Anything else will either not be virtuous or will not require skill for the application of any labor. Consequently, they refer to as an injustice what is not an injustice at all.²⁻²⁰ But, we must not include here those who are

able to acquire some high office, either as a favor from others, which is tantamount to a gift among living persons, or because of birth, which is a bequest from one's ancestors. I am aware that this argument extends beyond the confines of this work, but because this has appeared to me to be a useful subject, worthy of careful reflection, I have not been able to restrain myself from dealing with it. I beg my readers' indulgence. How pleased I would be if he should share my view. Nevertheless, I fear that few will agree with me, so much do men prefer to protect themselves from committing an error and to accuse others of doing so.

Summary of
what has
been said.

Enough has now been said of the principles from which value is derived. It has been seen that since these principles are certain, invariant, universal, and based on the order and nature of earthly matters²⁻²¹ -- nothing among us is arbitrary and accidental, all is necessarily order and harmony. Values vary from one thing to another, but not capriciously. Their very variation is orderly, with exact and immutable rules. These values are ideal;⁴⁻³⁷ but those ideas of ours which are based on need and pleasure are part of man's internal makeup. They contain within them the ideas of justice and stability.

Reflections
on fashion;
its power.

An exception to what I have just said would appear to be required here. Sometimes fashion affects our ideas and values. As for the sense in which the word fashion⁴⁻³⁸ is intended, after considerable thought I have found it possible to give it only one definition. Fashion is a malady of the cerebrum common to the nations of Europe,²⁻²² because of which many things are rendered of little value simply because they are not new.⁴⁻³⁹ This is an illness of the mind which rules over but few things. To find some rationality in it, you would have to say that a good part of such tastes results from imitation of the customs of more dominant nations.

Having said this much about fashion, it is necessary that I define its limits, which I shall do now, in order not to have to do it in a less appropriate place.

Fashion is entirely in the realm of the beautiful; none of it is in the useful. As a result, when a thing which is more useful and convenient is in fashion, I do not think of it as fashionable but as an improvement of the arts and of the comforts of life. Beauty is divided into two classes. One is founded on certain ideas engraved on our minds at birth. The other consists, though it does not seem to, of things which only appear beauti-

ful out of habit of mind, or custom. The power of fashion is extended only over the second class, which is greater by far than the first. It is appropriate, therefore, to say that the beauty of gems²⁻²³ and of gold and silver is universally established on the constitution of our minds, no part of it ever having succumbed to fashion, for it could not. Hence, the prices of such things are always recognized to be great and unique. Nevertheless, none of my observations are altered by fashion,²⁻²⁴ which only varies the utility of things as the pleasure enjoyed by using them varies. The rest remain the same.

The value of things which are unique.

I will complete my remarks by discussing the value of unique things and of monopoly, that is, of those things which cannot be made by others, like the statue of *Venere de' Medici*,^{4-40, 2-25} or those which become unique because of the unity of sellers. I have often found that even the wisest writers describe the value of these commodities as being infinite. But of all words that come from the mouths of those who reason about mortal things so often, I can think of none that is more appropriate than infinite. These writers have, perhaps, wished to say indefinite, but even this is inappropriate, for I believe every human thing has order and limits. Indefinite is no less alien to these limits than infinite. These things, then, have limits. Their prices always correspond to the needs and desires of the buyer joined together to form a compound ratio with the esteem of the seller. Hence, at times, their value can even be equal to nothing.²⁻²⁶ Moreover, it is always regulated, although it may not be everywhere the same.

Difficulty of determining prices a priori.

It may, perhaps, seem to many that from the observations made thus far it is easy to determine the value of all things. But to believe this is to close one's mind on the matter prematurely. It is most difficult, often impossible, for us to draw such a conclusion from principles thus established, which logicians would call a priori. Because, we would have to establish, for certain, that because scarcity and value depend on consumption, consumption likewise corresponds to, and varies with, value. The problem is rendered indeterminate by this relationship, as it always is, when two unknown quantities which have some relationship between them are set against each other.

The relationship between price and consumption

That differences of consumption emerge from price is obvious, if one recalls that aside from the air we breathe and the soil we stand upon, man regards nothing else as an absolute and eternal necessity. He must

and how one depends on the other, and vice versa.

feed himself, but not with any food in particular or any sooner than with any other. Air and earth are not scarce, nor do they have value of any kind. Man can abstain from the consumption of other things, more easily for some than for others; and he is willing to do so in proportion to the discomfort, work, and cost of acquisition of a thing.²⁻²⁷ Those which are worth less are, therefore, taken for consumption more readily. Consumption is, therefore, regulated by price; price, in turn, arises out of scarcity.

How consumption of a thing increases its price, and how a high price leads to the reduction of consumption.

Price, on the other hand, is regulated by the exhaustion of a commodity. Because if, for example, 50 thousand casks of wine were being consumed in a nation, at the same time that a similar quantity was being produced, and if suddenly a military contingent should appear in the nation, then the price of wine would rise, because now people would be drinking more of it.

Some find an unalterable relationship here, a vicious circle. They would be able to solve this problem if only they would reflect on what I have already said. That is, in many instances, scarcity and abundance suddenly reverse places due to external causes, without man's interference but, instead, because of seasonal changes.⁴⁻⁴¹ In such cases, prices follow scarcity and, although men possess unequal wealth, purchase of certain commodities always corresponds to a certain degree of wealth. Should these commodities fall in price, even those of less wealth would purchase them. If their prices should rise, those who formerly used them, would begin to abstain from their use. This is supported by many observations. For example, in good growing seasons, in the kingdom of Naples,¹⁻⁶ a total of approximately 15 million *tumoli*³ of grain are consumed annually. We know from experience that occasionally, in the most fertile years, as many as 6 or 7 million more *tumoli* of grain, than usual, are harvested. Moreover, export⁴⁻⁴² is never more than 1½ million, nor is the amount stored for their later use greater.²⁻²⁸ On the contrary, in barren years it is certain that no more than 8 million have been harvested, and we have not imported more than a million from abroad. Nor has the amount stored from previous years come to 2 million.²⁻²⁹ For this reason, in years of plenty, incomparably more grain is consumed, otherwise used up and sown, and smaller quantities in calamitous years. This is why

³A *tumolo* is a measure equivalent to three Neapolitan cubic feet, less one fiftieth part.

the limits on consumption are fixed more by price than by the number of *tumoli*.¹⁻⁷ Every year, for example, the kingdom consumes 13 million ducats worth of grain. This is always the same whether this sum purchases as many as 15 or as few as 10 million *tumoli*.⁴⁻⁴³

How these changes arise, once this relationship is given.

Changes in the scarcity of goods, whose production is not subject to variation, have no other extrinsic reason but fashion. Precious metals, however, (and, due to their regal beauty, gems) are not subject to such capricious changes in tastes or to such variations in production. They, therefore, have constant prices more so than any other product. Their production varies in accordance with the discovery of richer mines, as in the case of the American discoveries. This is why their value fell as their use rose.²⁻³⁰ It was this increased use which prevented their value from falling as much as their abundance would have required. For it is from this relationship that the great and most useful effect of the proportional equilibrium of all things has arisen.²⁻³¹ This equilibrium, in its turn, conforms neatly with the proper abundance of both the comforts of life and worldly happiness, although not from human prudence and virtue but from the lowest stimuli of all -- private gain. For, in spite of ourselves, due to His infinite love of mankind, Providence has so arranged all things that our base passions are often ordered for the benefit of all.⁴⁻⁴⁴ I shall endeavor to explain how this has come about.

Explanation of how consumption is related to prices, and how prices are related to consumption.

Let us suppose that a country which is thoroughly Mohammedan in customs and religion should adopt the religion and customs of Christianity. Few grapevines would be found in such a country, because Mohammedans are forbidden from drinking wine, and I suppose they would have been obeying this law. But now, wine would quickly be rendered dear in price because of its scarcity;²⁻³² and merchants would begin to import a great deal of wine from abroad. Soon, however, because all would wish to enjoy such high profits, many new vines would be planted, so much wine would be imported,²⁻³³ that everyone would end by gaining only a just profit. Thus, things always arrange themselves at some common level, such is their intrinsic nature. Frequently, the size of a population even grows so much in this way that, though first drawn to this type of industry by the example of the first producers who entered the industry and by the earliest rumors, they impetuously turn to it, albeit so belatedly, that value falls below a just level. But then, as each person pays the pena-

of his rashness, all begin to withdraw from the industry, and the just limit of value is restored anew.

Two great consequences are drawn from this. First, one should not pay particular attention to the first movements of things, but only to permanent and fixed states. It is in the latter that order and sameness are found, just as water in a bowl finds its own level after some disturbance has caused a disoriented and irregular tossing about. Secondly, nature provides no examples of phenomena which display infinite changes. A certain moral gravity, which all things possess, always draws them from an infinite linear path and pulls them into one which, though perpetual, is circular and finite.

I have applied what I have said here to money, hundreds of times. As a result, my readers have fixed it in their minds. They have, consequently, been persuaded that the laws of commerce correspond with no less exactness to the laws of gravity and the laws of fluids. The desire for gain, or the desire to live happily, is to man what gravity is to physics. Once this is given, all physical laws of matter can be verified perfectly, by one who knows how, to the ethical⁴⁻⁴⁵ principles of our lives.^{4-46, 2-34}

CHAPTER 3

*DEMONSTRATION THAT THE PRICES OF THE METALS ARISE MORE FROM THEIR
USE AS METALS THAN FROM THEIR USE AS MONEY.
TWO CALCULATIONS WHICH CONFIRM THIS FACT.*

From the very start of this book, as I have thought of what I would write, it has rarely occurred to me to write anything against mankind, out of respect for and gratitude to the author of all things. Men who allow themselves to be called wise are vexing to me. For on one hand, they confuse our errors with the ordered arrangements of Providence; and, on the other, (filled as they are with the idea of their own merit) they complain that whatever transpires, which they themselves cause, is unjust and disordered. In order to mask their own impiety they have invented words like chance, fate, and destiny. I, on the contrary, am thankful to God whenever I consider the order in which everything is constituted for our benefit. I see nothing but justice and equality whenever I return to His works.

*Difficulty
of under-
standing the
just price
of things
and that it
is overcome
by the mul-
titudes.*

In particular, I am amazed at the exactness with which value is assigned to each thing; I am amazed even more, the more I understand the difficulty of expecting one man alone to settle this matter and to establish prices.²⁻¹ Such feats of arithmetic must be who sets the price of a pound of gold, something brought to us all the way from India, know how to perform. Such an achievement requires the use of thousands and thousands of men in many different regions of unequal fertility, in which the value of money⁴⁻¹ varies with population and wealth.²⁻² Some employ a day's labor on producing a coin, others the labor of a month; still others are engaged on not one but on hundreds and thousands of pounds of the metal. The proportion of talents of so many different people is unequal.

As regards the sale of things, on the other hand, how does anyone know how to determine the proper proportion in such a multitude of buyers, buyers who vary in tastes, talents, needs, and opulence; who differ in number, from country to country; and who are sometimes more and sometimes less distant from the main market place. Add to all of these, the tariffs of princes, the exchanges of merchants, the frauds, contraband, and virtually infinite numbers of risks and losses -- all of which are as unequal in their probability of occurrence as in the magnitude of dangers involved.

The price of a thing must be derived from all of these principles. When a lone individual becomes frightened and hesitates, the mass of men interested in it restores his courage. A multitude of ignorant men knows much more about civic matters than one wise man alone. That these men do not err, that the market price is truly the just price, can be shown, as follows. If all persons who compete in the gold trade should live on and be nourished by it, the industrious enriching themselves, while others, due only to their own negligence, are deservedly punished by losses -- then each would surely earn a just profit for himself and none would harm his fellows.²⁻³ If some should constantly incur losses, however, they would avoid such an industry and abandon it, causing the circulation of the merchandise to come to a halt, like a watch which stops running for the lack of a single tooth in its movement.²⁻⁴ If, on the other hand, another group should enrich itself to excess, its number would soon become so great that those who had abandoned less lucrative trades would turn to this new one.²⁻⁵ The temporary gain enjoyed at first would be seen to diminish, and profit would be driven to a just level.⁴⁻²

That the value of the metals does not arise principally from their use as money is demonstrated.

The just price of gold cannot, therefore, be known with any assurance in any other way than by asking how much it is generally worth, compared to all other things. It is necessary for me to linger over the discussion of the value of the metals without withdrawing the principles stated in the preceding paragraph, at least long enough to show another important truth. Namely, whether one observes the use made of the metals or their destruction, the metals will be seen to derive their value much more from their role as metals than their role as money.⁴⁻³ Hence, one can conclude that they are used as money because they are valuable; they are not valuable because they are used as money. It, therefore, behooves me to establish firmly the intrinsic value upon which every truth of this science is

built. I will show, for example, how much disproportion there is between the metal in its monetary use, on one hand, and the metal in its use as a metal, on the other.⁴⁻⁴ It will, thus, become apparent that the principles on which price is based result more from the latter than the former use. An arithmetic calculation is needed for this purpose and we now turn to this.

Calculation of the quantity of silver in Naples.

I believe our kingdom only has silver (leaving gold aside for the moment) in the amount of 26 million ducats. Here I use the term ducat as a unit of weight since, as we know, 15.6 ducats are equal to one pound of pure silver.²⁻⁶ I could have made the computation in pounds, but it is always better to use words with which we are more familiar and ideas which are clearer. Here are the reasons for my opinions.

In Naples, a city rich in the metals, one finds churches which are filled with silver. The treasury of the chapel of *San Gennaro* has in excess of 100 thousand *scudi*, in silver.²⁻⁷ Many churches have more than 60 thousand and at least 5 or 6 have in excess of 40 thousand. To reveal the magnitude of the amount, one needs only take into account the most necessary utensils such as chalices, patens, incensories and so on. Naples boasts of some 304 churches, in addition to more than 110 additional chapels, brotherhoods, and congregations -- all plentifully endowed. One must include in these over 2 thousand beautifully garnished alters. From all this, I would estimate that, in Naples, 3 million ducats, in silver, are devoted to sacred ceremonial uses.

I would add to this an estimated 5 million more in private homes, and I probably underestimate the true amount because fashion has rendered incredibly common such things as watches, snuff boxes, sword and candle holders, dinner tableware, and silver cups and saucers. Moreover, Neapolitans resemble the ancient Spanish in virtually all of their customs and find great pleasure in keeping their coffers, which they call *scrittore* and *scarabattoli*,⁴⁻⁵ filled with silver antiques. On this basis, I believe I have not erred in my assumptions. To be persuaded, one must only examine the pledges left as collateral at our banks and *monte de pietà*. Over 400 thousand *scudi*²⁻⁸ in ornaments and jewels are kept in the small pledges at the *Banco della Pietà* alone. Among these, there are at least 50 thousand *scudi* in silver.²⁻⁹

In all, then, Naples has a total of some 8 millions in uncoined silver.

The realm has a population 8 times greater than the

capital, and I believe it approaches 340 thousand inhabitants today. To be sure, it is incomparably poorer than the city, but one should expect that anything so widely distributed would appear to be less than something that is more concentrated. For example, the churches of the realm are surely 20 times greater in number²⁻¹⁰ than those of Naples. Among these, there are many famous sanctuaries, monasteries, and remarkable cathedrals, all rich in silver; and one would not believe how wealthy many chapels, which are, in the poorest parts of the realm, really are. Many cities have continued to retain a large number of sacred places going back to ancient times, when these cities were heavily populated. They still resemble the ancient cities which Tebaide had at one time, cities whose populations consisted entirely of hermits and virgins. Consequently, it should not seem altogether too strange for me to assert that the sacred places of the kingdom have 6 millions in silver, and the laity still another 6 million more, which brings the value of uncoined silver in the realm to a total of 20 million ducats. These estimates make sufficiently clear how much money we have;²⁻¹¹ the general recoinage of all silver money by the marquis of Carpio is known to have minted 352,388 pounds of silver or the equivalent of 5,604,309 ducats.

There is no doubt that, although luxury in our day has increased beyond measure, the present quantity of silver money is either equal to or, perhaps even less than it was then. For, the use of gold money has grown infinitely, paper representing money is more common, and, in any event, it is the velocity of circulation of money, not the quantity of the metals, which makes the quantity of money appear great or small.⁴⁻⁶ That the amount of silver today is small can be seen by noting the fact that the banks of Naples, which have beyond question issued 3 millions in paper money, hold a quantity of silver equivalent to only 400 thousand ducats. And I do not wish to raise any difficulties over the fact that in coining silver money among us the marquis of Carpio was always followed at that time, and that, in consequence, 17 million ducats, in all, were coined. But because the coins of Carpio are, in large part already missing; and even many of the newer coins have either been melted down, been exported, or lost altogether, it cannot be said that as much money as had been coined still exists; the amount is incomparably smaller. These, then, are the calculations I have been able to make and this is the basis on which I know many of the things I have been reasoning about.

Reflections on political calculations and their uncertainty.

Nevertheless, the calculations of political arithmetic are a risky matter. They are the source of serious errors, for they must all be made without any confirmation or endorsement by the prince; and only princes who devote themselves to such studies could verify such facts and events -- only they have sufficient authority to do so. Such errors, then, must inject themselves with much more facility when passion guides the mind, and when one sets out, not to find truth but to demonstrate what we have always wanted to believe.

William Petty,⁴⁻⁷ of England, is an unfortunate example of this. In his ingenious treatise on *Political Arithmetic*⁴⁻⁸ he has successfully demonstrated with his calculations, many things which are very far, indeed, from any semblance of truth. Instead of truth he has established as his ultimate goal the glory of his nation, the merits of which did not otherwise need to be amplified with any such monstrous suppositions or to any such extreme degree as borders on the ridiculous. I have learned from such ruinous examples not to derive any consequences which would not still be true, even if I should be mistaken by 2 or 3 million, and I could scarcely be wrong by any more than that.

To begin with, I would point out that since the quantity of uncoined silver is 4 times greater than that already coined, then according to principles I elaborated in the preceding chapter, one should be convinced that the value of silver depends 4 times more on its useful value as a metal than on its use as money. Besides, once it has enough money for its trade, either the mines in a state would no longer be worked, or the price of money would be altered very rapidly. For this reason, it cannot be denied that, in a half century, the quantity of silver has grown by at least 5 million. Moreover, experience also shows that its value has not fallen by half, but by much less. From which it must be concluded that luxury uses have devoured and swallowed it up; and this is how its price has been maintained, despite continuous interferences.

If the metal used but not consumed is much greater in quantity than the quantity coined, then the destruction which is done to the uncoined metal is incomparably greater, by comparison, than that done by the destruction of money. From which anyone who still doubted it should be convinced, with new and stronger arguments, that gold and silver are valued more as metals than for their use as money. In addition, to turn to a more exact discussion of this subject, I would assert, on the basis of direct observations, that over the past

Consequences drawn from the calculations made above.

fifty years, 9 per cent of our *carlini* have been consumed; that the 12- and 13-grana have fallen by 7 per cent; and larger coins by 4 per cent in some cases, and by 1 or by 2 per cent, in others. Therefore, taking some middling figure, I would say that the mass of silver coins has fallen by 4 per cent, a value which is more likely greater than smaller than the actual value. Consequently, of 5 millions in coins, 200 thousand ducats have been destroyed.

I turn now to utensils. In order to prevent them from wearing out, coins are guarded as carefully as possible. Utensils wear out much more. Table settings, small plates, cups and other tableware, candle holders and sword handles, buckles, buttons, and snuff boxes all wear out by rubbing, vastly more than money does, as we cleanse ourselves and by the continuous use of our hands: But even this only comes to 800 thousand ducats, since no more than 4 per cent was lost in this half century. Considering that which is adopted in silver plating of wood and copper, and in false gilding, all done with fine silver, does anyone doubt that in 50 years the whole kingdom will have destroyed more than 300 thousand ducats? Considering, moreover, that used in vestments, gallon jars, silk cloth, and luxurious embroidered unmentionables, can the total attrition fail to come to 700 thousand ducats? Putting aside other modes of dissipation and restricting myself to what has already been said, then, it is clear that while 200 thousand ducats, in coins, have disappeared, more than 2 million of the remaining silver has gone abroad. Thus, the price of silver depends 10 times more on its use in commodities than on its use as money.

A similar calculation could be made for gold with similar results. If it is not apparent to some that this is true, which it surely is, they can be assured of this by turning their attention to the base metals, which also have monetary uses. They will discover that in every nation, only useful goods are thus employed; those which are not useful, such as stones and pieces of leather, cannot be employed for this very reason. In other words, men have not valued metals because they can be used as money, they use metals as money because they are highly esteemed and have utility.²⁻¹³ This was not the free and arbitrary choice of men but, rather, the inevitable result of the coincidence of the nature of the metals and the need for money. This, too, will be discussed in some detail in the next chapter.

Other calculations which

A different computation could have been made in order to establish the truth I have just demonstrated.

are more extensive and, therefore, less certain are alluded to.

This would have revealed how enormous a quantity of gold and silver has been exhausted in luxury uses, in the past two centuries. But because this calculation would be greater, it would be subject to many more serious errors. Nonetheless, I would also like to expose this to the light of day. In order to understand how much silver was brought here from the New Indies, it suffices to know what Don Gaspar di Escalona¹ says (for he was in a position to know). He says that from 1574, when Potosí was first discovered, until 1638, 395,619,000 pesos, in silver, were extracted from their ores. The peso is worth about as much as 12 of our *carlini*. If this took place in 64 years, then from 1638 to 1750, the present year, or 112 years in all, at least as much has been extracted from their reserves. There is no doubt that this plentiful source has been diminished by that much already. In all, this comes to more than 860 million ducats. Whoever says, therefore, that twice as much as Potosí alone yielded was withdrawn from all the mines of America would surely be stating less than the truth.²⁻¹⁴ (In addition to the mines at Potosí, America can boast of rich mines at: Copiaco, in Chile, and those of de la Plata; Mexico, Terra firma, and Brazil are also rich in silver.) Taking all these together, then, from its discovery until today, much more than 2,500 millions of silver have been brought here from India.²⁻¹⁵ To this should be added all the metal which was found in the hands of the Indians, collected and labored over by them for so many centuries. As for Europe, observe that the silver that was there before Christopher Columbus was certainly enough for use as money and for not exactly insignificant luxury uses; and there must be added to this all that was produced in our mines. Then, surely, although what Sthall, who places Germany before the Indies, affirms²⁻¹⁶ is false -- namely, that in 400 years, 40 thousand million *lire*, in silver, have been yielded by them -- these mines must have always been very rich,²⁻¹⁷ for it is still worthwhile to work them today. Hence, in two and one-half centuries, there have certainly been 4 thousand million silver ducats in Europe. I also believe that not much more than 1,500 still remain at this time; nor have as many as one thousand been sent to the Orient. All of the rest have been absorbed, devoured, and destroyed in luxury uses. Certainly, no more than 200 million²⁻¹⁸ have been used to increase money. All

¹See his *Gazofilacio Perubico*, folio 193.

things considered, this is a small amount. These figures, the correctness of which I would not rely upon too much, to be truthful, may nevertheless be useful in confirming an already manifest truth. I would not say more than this at this time.

Conclusions from what has been revealed to now.

My readers may note that I have demonstrated here that gold and silver have a true intrinsic value, which derives neither from their monetary use, nor from either our capriciousness or any consensus among nations. To accomplish this, it has been convenient to develop the principles of the value of all things taken generally, and then to adapt these to gold and silver. Next, I have pointed out that they have not only had an intrinsic value to begin with, but that they still have it now that they are used as money, for they are worth much more as metals than they are as money. But since all that has been discussed here regarding intrinsic price may also be true for other precious goods, this discussion would be of no real benefit to any, if no further examination were made of the reason why money is made only of gold and silver, and not, for example, of: gems, rare skins, porcelain, hard stones, ambers, crystal, or other things. I hope to demonstrate that this follows neither from any consensus nor from our free choice, but from the fact that gold and silver conform to the nature of money better than anything else which might be adopted for this use. The following chapter is devoted to this subject.

CHAPTER 4

WHY THE METALS ARE NECESSARY TO MONEY.

THE DEFINITION OF MONEY.

THE PECULIAR QUALITIES OF THE METALS WHICH ARE NECESSARY TO MONEY.

CONCLUSIONS.

Great institutions do not originate with man.

I believe strongly that none of the remarkable and most useful institutions of civil life are due simply to human wisdom. Instead, they are all absolutely pure gifts of an amiable and beneficent Providence. Great things surely have small and invisible beginnings, a slow growth, and impregnable power from the start. For they are sustained by nature itself in order to give them an orderly movement. Man can neither perceive an institution at its start, nor arrest its growth; neither can he undo it once it is established. Because man's power does not extend beyond the confines of his own brief life, it is not possible for him to prevent the start of new things before his own emergence nor for him to be certain that his wishes will be obeyed beyond his death.²⁻¹ True, as men see the good ordering of things accomplished, they credit themselves with having wished to institute such things and, so to speak, to perfect them. But this perfection is not given to men in all things. Perfection is either inherent in the nature of a thing, in which case it will accompany the thing; or it is not, and it is alien to it.

Romulus surely was not attempting to launch a vast empire, nor was Augustus aware that in perfecting and establishing one he was laying the seeds for its destruction. That very virtue which contributed to the aggrandizement of the republic, and those vices which destroyed it, originated in men by the orders and defects of that state which was disposed to produce these effects.

To return to the present subject, the institution of money is without doubt a great thing, though it is not true that in the beginning, men thought of using it. Its use began, as I have already said, with practically no awareness that it was being used and with no understanding of its utility. After it became known and was made universal, men set about to improve it. It then became possible to facilitate its improvement by coinage and by other means which were consistent with its nature. But there must be no doubt, which I will demonstrate in this chapter, that it was Providence who wished that we have the use of money, and who so arranged matters that once the metals were understood, money had necessarily to be introduced. Once it was introduced, nothing less could be done with the metals, nor could the metals be replaced by any other substances given the nature of the needs of one and the properties of the other. So very important is this subject that I trust its discussion will be pleasant to my readers and useful to them.

Money was not instituted by universal consent.

Men are truly laughable when they say that all men agreed, at the same time, to use those metals which were of themselves of no use as money, thus bestowing value upon them. Where are these meetings, these conventions of all the human race? In what century did they occur -- at what place? Who are the delegates through whom the Spanish, the Chinese, the Goths, and the Africans agreed with such conviction that for so many centuries later their ideas would never change -- even at some future time, when people whose existence was not yet known would be involved? Barbarians who destroyed the empire and Romans who defended it were resolute foes, were opposed to each other in every respect but one; they were in agreement in this alone: that they would value gold and silver as wealth. Need one add that despite the concurrence of all men on this single sentiment (and their persistence in it for many centuries) that this still did not constitute the will of the congresses held at the foot of the Tower of Babylon²⁻² or at the exit of the Ark, but that this represents the dispositions of our minds and the intrinsic constitution of things? This is why they are always the same and have always, and at all times, been so. This seems to me to be demonstrable on the evidence, and I would reply to these arguments as follows.

The connection between money and the metals

Whenever one wishes to show a necessary connection between two things, he would do well to examine the nature of both things carefully. Any indissoluble relationship which might exist between them could be disco-

is here demonstrated.

vered, if at all, only by means of just such an examination. I will, therefore, begin by examining the nature of money, and then proceed to discuss the properties of silver and gold. It will soon become apparent that money could not exist without the precious metals. And although money will be the object of my deliberations in the next book, as long as I have already approached it in this chapter, I will begin by stating its definitions, reserving their discussion, in turn, for the second book, thus establishing the entire discussion on a thoroughly well reasoned footing.

Definitions of money.

Money is of two sorts: ideal and real.⁴⁻¹ It is adopted for two different uses: to evaluate things and to purchase them. For the purposes of evaluating things, ideal money is as useful as real money, perhaps even more useful. Whenever money is used to express the value of anything, ideal money is considered. That is to say, a single word, just a number suffices to evaluate each thing, since price merely consists of a proportion which is admirably explained and understood by numbers. Consequently, with regard to this use I will define money as follows.

The definition of money insofar as it is a measure of the price of things.

Money is a common measure used to denote the price of each thing. This application of the concept is useful beyond all belief, because without a common measure the proportions between things would be poorly understood. For, when referring to the ratio between one thing and another, only the ratio between the two things comes to be understood. If I say, for example, that a cask of wine is worth fifty pounds of bread, I understand no other proportion than that between grain and wine. On the other hand, if I know that a cask of wine is worth a ducat, I quickly have a clear idea of the proportion between wine and an infinite number of goods whose prices are known to me. It is common knowledge that this intelligence is acquired with little effort. That we profit by this is not open to doubt, because our happiness derives from nothing else than straightforward and true judgments. Misunderstandings have absolutely no other source but errors; judgments are never true if ideas are not clear.

Another definition since it is equivalent to every other thing.

Another use of money is for the purchase of the very things it evaluates. For this purpose, we can use only real money, that is, the metals.²⁻³ If one buys with anything else, it is because the other thing also represents the metal. This is to say, that the metal absolutely and originally buys and is equivalent to all other things. Hence, I believe that real money should be defined in this manner: Money consists of pieces of

metal which have been divided, by public authority, into either equal or proportional parts. These parts are given or taken without hesitation by all, as a pawn and a pledge of perpetual assurance that they will always be accepted by others, as an equivalent of that which was given originally in order to acquire the pieces of metal.

This definition seems to me to be adequately clear, and I do not believe anyone can have difficulty with it, in considering purchases involving fraud or deception. One must think of prices and contracts as valued in ideal money and executed in real money. Errors always result, therefore, from poor measurement of things in terms of some common measure, that is, against ideal money but not real money -- which is, in this case, always a true and faithful equivalent, provided there are no errors or misunderstandings.

Properties of the metals relative to their utility when serving as money.

Having explained all uses of money, I turn now to a discussion of the nature of the metals, principally gold and silver.⁴⁻² The metals are the heaviest bodies in nature. They are liquefied with fire and later reconverted into durable solids by cooling. Mechanical instruments are used to harden and shape them as desired. Their utility is not related to their weight when used as money, but only to their malleable and fusible character. But, perhaps, no one will be surprised to learn that the proportion between the weight of gold and silver is as 19,636 to 11,087, for the purest silver.¹ According to the same division of parts, lead weighs 11,345, quicksilver 14,019, and common water 1000. In addition, a cubic inch of gold, according to Parisian weight, is 12 ounces, 2 grossi, and 37 grains, French measure; while a cubic inch of silver weighs 6 ounces, 5 grossi, and 38 grains. This, however, applies to silver which has been exposed to fire for a shorter time and which, consequently, weighs less. So much for weight. I repeat again that this particular quality adds nothing to the value of the metals. Lead, for instance, gains nothing from the fact that it is heavier than silver.

The same holds true for many properties of gold and silver. It is incorrect to think that these properties can enhance the value of the metal, although Pliny, and following him all others, regarded them as very important. For this reason, something which alters neither

¹As it is reported in the *Transazioni filosofiche*, n. 169, p. 926 and n. 199, p. 694.

the utility nor the scarcity of a thing does not alter its value either. John Locke has wisely asserted that sometimes a particular quality of a thing of great utility to life does not increase its price, if it does not increase its consumption. Thus, for example, if one should discover that it is possible to produce a medicine from grain which is definitely effective for the treatment of gallstones, then the value of grain would increase, but its price would not. If corncobs had the most charming, rosy color ever seen, they would be more beautiful. But if they were not put to any new uses, they would be no dearer than formerly. In order to determine whether what I am saying is true, it would be wise to comment briefly on those properties of gold and silver which I think especially distinguish them, and which have induced men to use them as money. At the same time, I will determine whether this agrees with what Pliny has had to say on the same subject.²⁻⁴

Many properties of the precious metals do not facilitate their use as money, as certain writers have asserted. Their substance.

Chemists regard only these two metals as perfect, because no foreign matter is mixed in with them, that is, they contain no material which can be crumbled, no material which is useless and subject to vetrification⁴⁻³ by fire. (Such substances are found in all other inferior metals, which are for this reason called imperfect.) Their substance consists of mercury and sulfur.

Chemists express certain physical properties by these two things; they are not to be confused with quicksilver and common sulfur. One of these stands for mercury, a substance which, though not volatile, can be liquefied, poured, and molded, which allows all soluble salts to pass through its pores. It is impenetrable by fire, which cannot alter its nature.

Sulfur, for its part, denotes those particles which impart consistence, durability, and color to mercury. Fire renders it volatile. It is soluble in salts, is impregnable to and can be dyed by them. And, sulfur, perhaps, is no more than particles of light. With good reason, such a constitution causes it to be called simple,⁴⁻⁴ since it is not possible to dissolve it into anything else and it remains immutable even after many experiments. Nor has it ever been possible to transform or reduce it with the strength of any other body, in such a way that it would not return to its original state and quantity. (Except for the rays of light collected, by slow burning, by Tschirnausen.⁴⁻⁵) Robert Boyle kept three ounces of gold in a liquid state for two months, without reducing them by even as much as one grain. He kept silver in the same state for a similar time and it was reduced by only a twelfth part,

Their immutability.

though this, too, could have been due to some extraneous material which became separated from it. The explanation of all these properties of gold and silver may be read, by whomever wishes, in the reflections read by Homberg, at the Academy of Sciences. These are certainly pleasant and useful and, in my opinion, the most fitting studies. But since they are not needed for the present purposes, I shall not comment on them here further.

Chemical
dissolution.

I turn next to a discussion of the dissolution of perfect metals, believed unjustly to be a property of gold which is useful to money. Dissolution describes division of a body into its minutest parts, floating -- as it were -- in a fluid which is dyed by these parts. Imitating the nature of the liquid, these parts themselves are made into a running liquid. This is why common water is the general solvent of all metals once they are pulverized into their most minute parts. Quicksilver also dissolves all metals completely purged of all oily impurities. Properly speaking, however, acids or salts are the true solvents of bodies. But none of these has the power to dissolve gold, except for sea salt. Only saltpeter will dissolve silver. Any acid melts all other metals. Curiously enough, sea salt combined with saltpeter dissolves gold very readily. The result is called *acqua regia*, which consists of two parts saltpeter to three parts of vitriol, and five parts of sea water -- all distilled together. If saltpeter, which dissolves silver, is mixed in with sea water, it becomes ineffective. True, the residue of *acqua regia*, recently distilled, can liquefy silver after any pieces of gold have been removed from it. This result, which was revealed by chance, was happily explained by Homberg, who discovered it.²

Purity.

It follows from this that gold is not subject to rust because sea water, which is not volatile, contains neither air nor dirt. Saltpeter, on the other hand, which has the power to eat into silver, and throughout which air and dirt are scattered, causes silver exposed to it to become tarnished and rusty, like any base metal. For the same reason, vinegar does not cause gold to disintegrate, as Pliny asserts. Nor is lead, mercury, or any other mineral strong enough to reduce it to waste. This is not so for silver which, though resistant to lead, can be chewed up and vetrified by antimony. Finally, both of these metals are the most plian

²In *Memorie del 1706*, p. 127.

Prodigious
suppleness.

following lead and tin; they are the easiest to liquefy, and are prodigiously supple. From what Pliny tells us, what was done with it in his time is minor compared to what is done today. Pliny says of gold, "*Nec aliud lazius dilatatur aut numerosius dividitur, utpote cuius unciae in septingenas, et quinquagenas, pluresve bracteas quaternum utroque digitorum spargantur;*"⁴⁻⁶ that is 12 thousand squared inches are contained in 1 ounce. Today, according to the very accurate observations of Reaumur,³ of France, our gold-beaters spread 1 fine ounce over 146 square feet, or more than 21 thousand square inches. Even this divisibility of gold, such as it is, is nothing compared to the divisibility of gold when it is used to gild some other metal; it spreads as the metal is extended. With such a natural quality which, once placed on a very large piece of metal is stretched out by means of a wire working plate, even an indivisible amount of gold would follow the base metal, apportioning itself over the new surface remarkably accurately and evenly. As far as I can determine, this divisibility can be understood from the fact that an ounce of gold gilds a piece of silver so finely that it could be stretched out over the whole length of 360 Italian miles. Beyond these observations, which are known today to few people, I cannot appropriately allow myself to go. It would, instead be far better, at this time, for me to stress a fact of which few people are aware: namely, that all these properties have resulted in nothing but a more base, less valuable gold and silver.²⁻⁵

These proper-
ties take
away from
rather than
increase
the price of
the metals.

To be sure, lustre and beauty alone are what cause men to love to adorn themselves with gold and silver. Moreover, people would not be disposed to abstain from using these metals, which explains why they are consumed faster, when they are, and why their use is spread over a shorter time period. For, they enjoy consuming them (since man is by nature inclined to fashionable things) the more so, the higher their prices are. In spite of us, gold and silver are so difficult to destroy that neither water, iron, fire, time, nor rust can consume them. They are spread out with such facility that to reduce their quantity ever so slightly causes them to adapt themselves and to cover as much surface with their luminous presence as is desired. Their diminished volume only makes them more and more rare and causes them -- little by little, as they are taken from the

³In the *Memorie dell'anno 1713*, p. 267.

bowels of the earth -- to vanish before our very eyes. But they settle down again with the first planting and return anew into the earth, their source, to come together again and, as some say, to regenerate themselves. Thus, if gold were ten times more likely to perish than it is, we would have taken a great deal less gold from India than we have accumulated to date. It would, therefore, be dearer. It cannot even be said that it would be worth less, once we succumbed to this inconvenience. Because as long as it remains beautiful, it will have value. Pearls reveal how true this is. Though to me they seem less beautiful than gold, they are nonetheless worth more because they do not last as long, and as a result are rarer and, therefore, dearer. Whoever reflects properly on what I have been suggesting here will come around to my point of view, and with no less conviction than I have. He will denounce the current view which, seeing gold used as money, quickly concludes that each of its properties invariably helps it to serve as money. But these are just chance statements. We might well turn to a discussion of those qualities which the metals have and which are uniquely desired for any substance which is to serve as money.

Quality which is sought in a thing in order that it may serve as money.

I will begin here by stating the requirements of real money, that is, what it will buy.²⁻⁶ For something to be used as money it must: (1) be universally accepted;⁴⁻⁷ (2) it must not be excessively bulky and inconvenient to transport and exchange. For, nothing can serve as an equivalent of the most precious and desirable things men crave, if it is not always generally accepted,⁴⁻⁸ and a thing which would make its possessor secure that he will never lack some other things which in his mind, he has decided he might wish to acquire with it. Moreover, a mass which is too voluminous would be too troublesome to give in exchange, and one for which it would soon be necessary to find a substitute to represent.²⁻⁷

Qualities necessary for universal acceptability.

For a thing to be accepted by all, it must have four qualities: (1) it must have an intrinsic and real value and, at the same time, must be esteemed by common consent,²⁻⁸ by all; (2) its true value must be readily ascertainable; (3) it should be difficult to commit fraud with; (4) it must be durable. I will not linger over the truth of these assertions, because, on reflection, the reader will understand them for himself, in which case it would be useless to explain them; or he will not understand, and it is, therefore, useless for him to read this work.

Things which

It only remains for me to apply those requisites,

cannot serve as money.

which I have shown are necessary for money, to the things which nature provides. Nature has conveniently provided the things destined to serve as money, and this will be understood in due course. First of all, things which have conventional rather than intrinsic value are excluded from consideration. This is why it is surely less secure to have in hand a thing whose value depends on public faith and agreement than one which necessity and utility makes valuable to mankind. Generally speaking, such a thing cannot become money. For this reason, a country could never be satisfied for long to utilize notes⁴⁻⁹ or money made of leather. And although notes⁴⁻¹⁰ do circulate as money in many places, I do not know if when a country which now uses notes should fall under a nearby hostile neighbor, whether the conqueror would be content to continue to allow payments to be made with notes, or whether it would prefer that metallic money be used instead. Many and great are the differences between common belief and the public faith. The latter is as immutable as it is universal. The former does not extend any further than to persons and nations which have subscribed to some convention; it is subject to question, and often even to dissolution, by every little event.²⁻⁹ Consequently, people cannot for long use only representative money.⁴⁻¹¹ Thus, that the value of the metals and their use as money rests on human convention is shown to be even more false.⁴⁻¹²

In the second place, all things which are subject to the tyranny of fashion are excluded -- and for the same reason. Public faith vascillates, but popular fancy is even more fickle. The third difference involves all those things which change value when differences in customs and religious worship occur. Few things appear to me to be free of all these exceptions save gold and silver. So much for the first requisite.

The metals exclusively serve as money.

The second of the four properties named above limits the function of serving as money strictly to the metals alone.²⁻¹⁰ The value of a commodity cannot readily be known if the many ratios which comprise it, explained in Chapter 2 of this book, are not reduced to a simpler number. This is only true for the metals. In them, all ratios are reduced to one, their quantity alone, for the metals have no natural differences in quality and none in their internal composition or external form and make-up. All the gold of the world is of a single quality and goodness; or, stated more correctly, gold can easily be reduced to uniform quality. This is why it is true that gold and silver are never perfectly

pure when found, whether this be in a mine or on the banks of rivers;²⁻¹¹ they are always found mixed in with other, more base metals or minerals. But, as is well known, these metals can be reduced in fineness as much as desired, by the use of alloys. Or, on the contrary, they can be made as perfectly pure as desired. This is not true, for example, of wine or grain or of many other things. The latter are not all of the same quality. Nor is there skill enough to make the wine of Ischia into wine of Tokai. As a result, it is not possible to sell all wines of the world according to the same measure, or at some common price. Gold and silver not only can, but must be valued solely on the basis of quantity or mass alone, which nature makes perfectly and infallibly understood by weight. Besides, a piece of gold of two cubic inches is worth as much as two pieces of one cubic inch each. But a diamond of, for example, ten grains, does not have the same value as two diamonds of five grains each. This is because two pieces of gold can always be combined into one without evidence of how they were bound or fitted together, as nature would join them, so that just how it is done cannot be perceived or distinguished. But, the art by which two diamonds can be made into one does not exist. Much the same can be said of the different sizes of: animals, timbers, marble, gems, and so on, whose rarity cannot be estimated arithmetically, by bulk. Although some provisions are sold by weight, as everyone knows, when any of them, such as fish, for instance, exceeds an ordinary size, it is not evaluated just on the basis of weight, but by much more. This will never be true of the metals.

Concerning the third quality, a bar of gold cut up into smaller pieces, twisted and malformed, is worth just as much as one that is straight and intact. This is not true of a piece of crystal, porcelain, or the like, because whereas the external physical make-up of a piece of gold is irrelevant, this is not so for the others. Some will say that as far as physical composition is concerned, nature places no value on the form of the metals, producing them either in powdered form, in the smallest fragments, or in a form that is of no particular use. But, fire does join them together, the arts do work them, and this causes them to be worth more albeit wholly distinctly from the value of the raw material. Hence, such materials are always valued in proportion to their weight, whatever their form. Gems, on the other hand, have no value as material, distinct from form. Their quality assumes thousands of different de-

grees of the transparency and vividness of water: sometimes fire-like, sometimes straw-like or cloud-like in appearance, and sometimes even split into many splinters. This is why the law cannot fix a universal value on them, and why everyone knows that even the greatest jeweler, one who has studied for many years, does not know the value of the gems as well as even an inexperienced goldsmith knows that of gold. It is certain that man will not risk concluding any contract except in situations he clearly understands without fear of deception. Since money intervenes in all contracts, it is most necessary that it be made of a substance that is easy to evaluate. But I have already demonstrated that nothing more appropriate or more secure than gold and silver will be found for this purpose. The Chinese nation demonstrates, by example, how easy it is to determine goodness and weight. Everyone there provides his own test and knows how to weigh gold and evaluate it perfectly well. In other, more learned nations, princes and republics have taken the trouble to determine the goodness and weight of the metals,²⁻¹² and to insure these by their own imprint and on their own faith. In this manner, they have brought the use of the metals, as money, to perfection, as the book which follows will show. But this is not entirely necessary.²⁻¹³

*Continuation
of the same
subject.*

It now remains for me to say something concerning the other two properties required of money. The first of these, the durability of gold and silver, which is greater than that of every other thing, requires no re-statement here. As for the second, the impossibility of committing a fraud with it, I would simply note that it is well known how much men have labored to duplicate and multiply gold. In this very century, the mysterious science of alchemy has become as ridiculous and despised as it was venerated and admired in earlier times. So little does such a mysterious deception resist time and truth that it has promised a utility out of all proportion to the laws of nature. What has always seemed strange to me, however, is that this science is scorned not only for the end that it promises (which, even to those who despise it, seems grand and excellent) but also because of the knowledge that it cannot be achieved. Its end is to convert either all substances or, at least, many base materials, such as iron or stone, into gold. I do not hear any deride the success of this enterprise as ridiculous and harmful. I have only heard it regarded as impossible. In fact, it has not yet been logically demonstrated that it cannot succeed.

But, since the efforts of many thousands of men,

over a period of as many years, have produced nothing; since it is clear that no product of nature has, to date, been reproduced and multiplied by the arts of man; since no one has ever produced chemically a single seed of grain, a piece of pumice, or marble, or wood²⁻¹⁴ — it follows that the impossibility of alchemy can be taken as demonstrated.

Another reason has been provided. The very simplicity of perfect metals precludes discovery of the arts needed to destroy or even decompose them; and, at the same time, it renders any means of duplicating them unknowable. This reason was a powerful one until fifty years ago, when it ceased to be so. At that time, chemistry acquired new powers, in addition to those of antiquity, for working on such bodies. For example, Tschirnhausen, of Germany, has the distinction of having produced a lens of the greatest size,⁴ such as has never before been seen, which was acquired by the duke of Orleans and donated to the Academicians of Science for their use. It enabled Homberg to see that gold could be melted and diminished, or destroyed, or vitrified by the rays of the sun.²⁻¹⁵ In the Memoirs of 1702 and 1707 one may read all the observations and differences of opinion on this marvelous feat, in detail, which, though true, seemed to many entirely incredible.

The true effect of alchemy should it ever achieve its goal.

With these new powers, the use of which has not yet been perfected, what may be achieved is still unknown. What could have been known from the beginning, but what people have refused to see, is the evil goal of alchemy. This goal is not merely to convert iron into gold, but to convert gold into iron as well, a pernicious end, directed solely to our impoverishment. I say this in order to make men aware of the deception which, though not always successful, is the most universal and frequent in our minds. When one places himself into a state of things which differs from those in which he actually lives, it is necessary to alter his ideas of the present state and to adapt them to the supposition made and to the new state. When we say *gold* today, the sound in our ears is one of magnificent opulence, of unbounded plenty or, in sum, of something which is desirable and good. When we say *iron*, we immediately think of a vile and contemptible thing. In the present state, we certainly do not deceive ourselves in this

⁴It weighs 160 French pounds and is 3 Rhenish feet in diameter. See *Memorie del 1709*, p. 15.

regard. But if we could exchange as much iron as we would like for real and perfect gold, then saying *gold* would arouse in us the secondary idea which today comes when we say *iron*. Nor would the beauty of gold be able to sustain the value of gold, or overcome the vulgarity of iron. Crystal, for example, which is surely beautiful beyond all things, is not worth as much as its small scarcity requires, because it is a thing which, besides being dug out of rocks, can be manufactured. In other words, the deception of words aside, alchemy promises us nothing but impoverishment. It would remove gold and silver from among those things which are rare and are, therefore, precious. If it should also do the same for gems, it would deny us completely of every means of displaying power and beauty. Neither would the consumption of gold increase. On the contrary, with its value falling so much, fashion would no longer require it. Natural gold would be left hidden in its veins, and artificial gold in iron. This damage would not be so serious, compared to the fact that it would deprive us of the use of money. Money would be completely reduced to copper coins, to *yellow iron* and to *white iron*, which is how the two valued names of *gold* and *silver* would now sound. Just how much trouble would result from having only copper and iron money will be discussed elsewhere. Once gold and silver had become useless it would no longer be possible to substitute them for other things, because gold and silver would no longer embody the same conveniences as before. For this reason, too, which seems most valid to me, the Author of nature would never permit the good moral order of the universe — which is completely maintained by money, around which it revolves like an axis — to be destroyed by alchemy. Nor does it behoove man to fall back to an art which would be so pernicious and so fatal to him, in the event its goal should ever be achieved. I would even be able to demonstrate, were it not so removed from my present purposes, that even that immortality and universal medicine promised us would not be less pernicious and lamentable to all those to whom it so foolishly seems advantageous. This is because everything which disturbs the infinitely beautiful order of the universe, and foolishly promises shelter from those events which, in our ignorance, we call disorders, is and always will be contrary to truth, impossible to achieve, injurious to Providence and, calamitous to the human race, should it ever come to pass.

Conclusion of all that has been

From the above discussion, it will be seen how necessary it is for real money to be measured by weight and to be made of such a substance as affords us the greatest

said.

protection possible against fraud and wear; and it has been amply demonstrated that nothing is more appropriate for this purpose than gold and silver. It must be concluded from this that gold and silver are necessary and indispensable to the needs of real money. It remains for me to say something about ideal money, which measures prices. Because only name and number suffice to create them, they do not appear to many to have any necessary connection with the metals. But, whoever believes this will, on reflection, be forced to agree that it is not possible for a country to introduce ideal money, except by means of real money. All imaginary money used for counting was certainly real at one time, and this is known to us from experience. Men are not able to accustom themselves to compute, from the outset, on the basis of abstract numbers which do not correspond to any specific material. Only when removed, by insensible degrees, from the scene of actual events, do people become very comfortable with the abstract.²⁻¹⁶ This will be discussed at length in the following book. For the present, I will briefly explain why the measure of things cannot be accomplished better than with the metal.

Measures must necessarily be as stable and fixed as possible, but such stability cannot be found in anything human. It is necessary, therefore, to substitute a slow change and an equable progression for it, of either increases or decreases, which no event can upset and seriously disturb. This property which, for example, neither grain nor wine manifest, is found in even the least precious metals²⁻¹⁷ which, as I have already indicated, are not subject to any variations in output, except when new mines are discovered (a rare event) nor to variations in consumption. Their prices are virtually constant and, because of the universal esteem in which they are held -- are everywhere the same. This is not because of a great many properties, but for one alone; that is, because they are metals, or because they are endowed with such singular beauty that they have always been highly esteemed. The metals are, therefore, no less fit for payment than for use in evaluating all things. Thus, they should be regarded as natural money. Indeed he who might wish to alter such an institution should be aware that serious disorder and violence to the laws of nature would result.²⁻¹⁸ For example, the choice of what substance will constitute money has not been left to our free determination, but has been based on gold and silver.

From all that has been said in this first book, I implore my readers to thank a Divine Providence who,

ter creating gold and silver for our welfare and making them understood by us, caused them to begin, by slow degrees, to be sold by weight and, to this end, to be used as money with intrinsic value,²⁻¹⁹ endowing them with other convenient attributes. They were adorned with such beauty that neither the inconstancy of usages, the barbarity of customs, poverty, nor excessive wealth have had the power to tear them from man's minds, and to substitute other goods for them. Philosophers have never been able to render them contemptuous; alchemists have never been able to reproduce them. We must, therefore, be thankful to the supreme powers here on earth who, while improving the intrinsic quality of the metals and attempting to bring them to perfection, have assayed, purified, weighed, divided, and stamped the metals with their own imprint, for the protection of their citizens.²⁻²⁰ The books which follow are filled with examples of improvements introduced by the civil community.

BOOK II

THE NATURE OF MONEY

INTRODUCTION

Of all the more serious and considerable harms which poets and other eloquent writers have inflicted upon mankind, probably the most serious is the falsification and destruction of the ideas in our minds, at the same time separating such ideas from those held by the multitudes. The latter are ideas which, because they are created by nature, ordinarily inherently contain justice and truth, ideas which have been labelled: the age of gold.

Man is virtually similar to brutes in all things. The degree of his perfection is summed up in all the rules of civil society, for it is these rules which have enabled him to advance beyond a savage life and away from a naturally perverse disposition to credulity, hatred, envy, and rapacity. After virtually infusing man with a certain innocence and simplicity, poets have -- for reasons I have never understood -- criticized him for having these very traits. Such poets have at first vehemently despised silver and gold. They have, perhaps, thought that they were thus vindicating themselves for the wealth they had acquired, wealth which they had neither earned nor otherwise deserved. But, because their writing was filled with every ornament of eloquence, read and followed by all, the words of the poets have in every century been discussed by wisemen with approbation. But these words could not have influenced the policies of nations for, as we know from experience, men live for the most part, according to how they are inspired to live by nature, or in accordance with how nature illuminates the truth. Men, that is, follow passively, repeating sentences which others have eloquently stated before them and which they have committed to memory, whether such rules conform to the conduct of their own lives or whether they prefer to disagree violently with them.

This is why money, which men have regarded as the origin of every evil and as the instigator of every depraved tendency, still continues to be used without interruption, as it has been down through the ages. I myself, who has never been disposed to be the admirer and follower of the opinions of the few, who believes moreover, that to separate oneself from the many is not always a sure path to truth, have wished to determine for myself whether the introduction of money is truly harmful, or whether it constitutes a perfect example of those laws of civil society which have led us onto the path of a good life. I have, on reflection, concluded that money is, indeed, a great and most useful invention. But we should not attribute its great benefits to human efforts. We should, instead, render our most humble thanks to the Deity, as we do for the provisions of life. I have come to know this, as I will assert in this chapter and as I will proceed to show in the present book as I discuss the utility and convenience of money.

CHAPTER 1

DEMONSTRATION OF THE NATURE OF MONEY AND ITS UTILITY.

Necessity of commerce among men and its definition.

The necessity of trade for sustaining life and achieving happiness on earth is well known, for trade is related to the mutual needs of men. It can be defined as: *the exchange among men of their respective labors for the satisfaction of mutual needs.* For this reason, whatever benefits trade is itself generally most useful. The inconvenience of ancient and primitive methods of trading, which consists of people bartering one thing for another, obviously arises from the fact that it would be too difficult for a person to know to whom a thing which he has in excess is lacking, or to know who possesses precisely what he himself is lacking.⁴⁻¹ Besides, not all things can be transported, stored for long periods of time, paired exactly with other things, or shared according to present requirements and common need.²⁻¹

I have wondered whether this inconvenience might not be eliminated by communal living. For example, we know from experience, that small communal societies, such as religious orders, live better communally and generally more happily than others. Why wouldn't even large bodies, such as cities, or even whole kingdoms, also live blissfully communally?

I have found that it is not possible for such communities -- which are not made up of carefully selected men of common virtue -- to compel each person to labor until he is exhausted and to require him to place the results of his labor into a common, open warehouse in which he would find all things he might need for his own pleasure, deposited by others. But, unfortunately, with such an arrangement, a lazy man could easily defraud the public and live unjustly on the labor of others. Indeed, since there would be no means for any-

one either to enrich or to impoverish himself, an industrious man would work less, for he would no longer be moved by the spur of gain.⁴⁻² Expecting to live on the toil of others, the slothful would do little or nothing. In fact, even the virtuous would seek to live more sumptuously than would be appropriate for the level of their talents. This is why we find that because of the different degrees of excellence of their efforts, merchants and peasants earn different amounts and, as a result, some live magnificently while others live parsimoniously. In communal living all would seek to live equally as well as all others. But such an order could not possibly be maintained, and I would alter it in the following manner.

The idea of a republic which lives communally, the most perfect of all ways of trading.

We could keep an accounting of how much each person labors. He would then share in the contributions of others only insofar as the results of his industry are of use to society, and no more. Moreover, the system should be so constituted that anyone who brings the results of his labors to a warehouse designated for the purpose would be given a note⁴⁻³ which would say, in effect: "This person has deposited such a quantity of such-and-such goods in the public warehouse -- for example, 100 pairs of shoes -- for the value of which he remains a creditor to society." Such an arrangement should be made that no one would be allowed to remove anything from the warehouse without first presenting notes indicating how much he had to his credit; thus, he would not be allowed to withdraw more value than that of the goods which had been credited to his account. Once he had withdrawn merchandise equivalent to that value, he would then either leave at the warehouse the note he had originally received, or he would destroy it.

It would be inconvenient for the note to state that its holder only had the right to provide himself with some specific thing (which would be the case if it said, for instance, that a person who had given up 100 pairs of shoes deserved to receive 1000 pounds of bread, and nothing else, which is to say that his note would only be accepted at a bread warehouse). Notes⁴⁻⁴ should be accepted freely at the doors of all warehouses, so that everyone would be able to provide himself with whatever he might need. This could only be accomplished if the prince assigned a value to each thing. That is, the value of each thing would be regulated by a common measure declaring, for example, that a bushel⁴⁻⁵ of grain corresponds to so much wine, or so much meat, or oil, or clothes, or cheese, et cetera. Exactly how much belonged to each person for what he had done would then

be known by means of this measure and this schedule.⁴⁻⁶ It would also indicate when his credit had been exhausted.

The prince would have to be allotted a certain number of notes which he could distribute to persons who serve the entire body of people²⁻² so that they might live according to a standard determined by the importance and merit of their respective functions. Because this system obviously requires that the warehouse have no greater debt, in bills, than the quantity of goods it actually contains, it would be necessary that all citizens be obliged to contribute some goods to the warehouse gratis, that is, without receiving any notes for them. The quantity of these goods would be equal to the total amount given to the prince for distribution to the ministers of the society. The truth of what I have been saying is as evident as is the disorder which is avoided by it.

Certain inconveniences and their remedies.

The principal, indeed, the unique disadvantage of this arrangement is the possibility of fraudulent notes. The number of different types of warehouse watchmen employed, for instance, would not simplify the distinction between those who are honest and those who are not. Caretakers without faith or virtue could favor their friends and relatives by making them creditors to the public for a value greater than that of the merchandise deposited by them. Such a watchman might declare, for instance, that someone who had deposited only ten pairs of shoes in a warehouse, which would give him credit for a thousand pounds of bread, is credited instead with having brought not ten but one hundred pairs. This would be the same as making it appear that the warehouses contained more than their true abundance, and would make them owe a greater quantity of goods than they actually contain. Such fraud would soon empty the warehouses of the goods in their care, though not without a good deal of injustice.

But this could be avoided in many ways, the best of which would seem to be for the prince to sign only a fixed quantity of notes, all of the same denomination⁴⁻⁷ -- say the price of a pound of bread -- printed on either paper or leather.⁴⁻⁸ Some convenient sum would be distributed among the custodians of the commodities who would, in turn, give them to persons who had deposited or would take them from persons who had withdrawn goods. The total price would no longer be represented by a single note. On the contrary, those who brought goods of greater value than one pound of bread would receive a number of notes equal to a greater value. Confusion of different types, such as the falsification or contin-

uous creation of new paper notes,⁴⁻⁹ would be avoided in this manner. Moreover, the custodians could render their accounts exactly. Finally, if it were certain that notes⁴⁻¹⁰ would not be refused by anyone for fear of fraud, a society could truly be ruled and conserved.

This is how things truly appeared to me as I pondered and arrived at these conclusions. Meanwhile, I sought to determine whether any difficulties remained to be surmounted and whether historians or travelers had ever discussed examples drawn from other nations, which tended to confirm my ideas. At this juncture, a veil seemed to fall away from my eyes, and I realized that I had inadvertently been in the present-day world, for I had only traveled on the soil of my paternal land,²⁻³ from which I had always thought myself so distant. For this reason, I hope that my readers will join in the discussion.

Our present state is one of communal living; all disadvantages are remedied by money.

I saw, and all can now see, that trade and money -- its prime mover -- have led us from a wretched state of nature in which each thinks only of himself, to a blissful communal life in which each thinks of and labors for all. We maintain ourselves in this latter state, not simply by the principles of virtue and piety, which where entire nations are envisaged are bonds that, by themselves, do not suffice -- but by the self interest⁴⁻¹¹ and comfort of each individual.

Coins are the notes discussed here,⁴⁻¹² because in the end these are the representations of credit which one has against society, either directly, by reason of the work done by him, or indirectly because of coins donated to him by others. In reality, there are no common warehouses among us, there are only private stores which correspond to them. Notes -- really coins⁴⁻¹³ -- are not paid to and collected from general custodians. With much greater wisdom, each person cares for his own labor and tries to fill his own store, giving up money which he receives by trading, or acquires by selling, merchandise.

In other words, virtue and faith are not needed by public warehousemen, nor is the vigilance of the prince required, because notes are not squandered. Everyone is reluctant to part with them since to give up money is to dispose of one's own arduous toil. Such a disadvantage which would not be sufficiently controlled by any virtue that is presumed to prevail in that first state, is taken care of in the present state perfectly by self interest,⁴⁻¹⁴ the force of which is always found in all of us, even the most vicious. Although restricted and chosen societies, into which men are not born

but enter as adults, are most happy, even when they are founded on virtue alone, nations and kingdoms would have ruinous and vacillating governments if the virtue which sustains them were not joined to worldly interest, because it is not possible to fully purge such states of the bad seeds that arise in them.

What taxes are.

Actually, the notes which are given to the prince, to whom it is appropriate that everyone leave some portion of his labor *gratis*, would be our tariffs and taxes. These are really nothing but a part of each man's labor, placed in a common pool and reduced to money, which the prince then distributes; these are the wages and the expenditures which the prince creates. Finally, every disadvantage which notes might have, whatever material they might be made of, has been eliminated by metallic money. The quality, coinage, and structure of the latter provides for its intrinsic value a protection against private fraud, an abuse which even the prince might commit;²⁻⁴ for if the material did not have to contain the full value of the money, then the prince could always print an excessive number of notes.²⁻⁵ The doubt alone which he could cause in this way would be sufficient to take away from, or reduce their price, and inhibit their circulation.²⁻⁶ As for the material of which money is made, only God could increase it; and mining it or attempting to attract it from abroad would only give rise to as much expense as it is ultimately worth. Thus, nothing is gained by increasing it. Hence, it is of the greatest importance that money should be made of materials the whole value of which is natural and intrinsic and not imaginary.

Conclusion

I will not carry this discussion further. Let my readers develop these considerations for themselves. They will find marvelous lessons in them concerning not only the constitution of society, but also that of contracts and money. This mode of reasoning will provide the best demonstration of the advantages of money, which have been exaggerated by many authors, and which many others have been atrociously rude in abusing. Neither group, nor anyone else, has seen what is here so comprehensively demonstrated: namely, that money is useful and excellent. I shall postpone until the next chapter discussion of the common measure of things, the utility of which has been amply demonstrated in the present chapter. Only the defects which may inhere in money will then remain to be explained.

CHAPTER 2

THE NATURE OF MONEY, THE COMMON MEASURE OF PRICE. IMAGINARY MONEY⁴⁻¹ AND MONEY OF ACCOUNT.

I have demonstrated what money is and what use it naturally has when it purchases and is equivalent to all other things; I now turn to a discussion of money as a *measure of the proportion which all things bear to the necessities of life*, which is indicated by the price of things. Since things are ordinarily valued with both *imaginary money* and *money of account*, I will discuss these further.

*What ideal
money is.*

Imaginary money refers to money which does not correspond exactly to any piece of metal to which it is equivalent in value. For example, the Roman ducat²⁻¹ is ideal money today because no one any longer mints coins which contain ten silver paoli. Consequently, the ducat²⁻² is no longer found current in the market place; it is only kept by collectors as a curiosity. Other examples of this are: our *uncia*,⁴⁻² the English pound sterling, the French pound of account, the gold ducat *di Camera*, the Venetian bank ducat, and many other coins. Ordinarily, this ideal money is the exclusive *money of account*, that is to say, money with which one counts, contracts, and values every other thing; it has arisen in the same way as have coins which are imaginary today. In every nation these are the oldest coins. They were all real at one time, which is why they were used for counting. But as princes have changed the proportions and the forms of these coins, such coins have become imaginary and have been retained only to facilitate the accounting function. In some countries, as in France, for instance, sovereigns have issued strict proclamations at different times, ruling that only certain coins could be used for purposes of agreements and contracts; no others

were allowed. These were obviously regarded as most important matters in that country. But virtually all nations, including ours, have no such laws constraining them. Practice has deemed that the function of counting be accomplished with three different coins, among which one contains another some integral number of times, without any fraction remaining. The numbers used for this are almost always twenty and twelve. For example, we compute in ducats and in tari which are a fifth as much; but both are real, silver coins. We also use the grana, which is made of copper and is a twentieth part of a tari, and is, in turn, divided into twelve parts, called cavalli from the ancient imprint which these coins of the king of Aragon once bore. Cavalli are no longer made because of their excessively small size; they have, consequently, become imaginary.

Principles which should be adopted regarding changes in prices caused by the alteration of coins, their measuring rod.

To discuss in more detail money of account and ideal money, and their utility, I would say that it should be established as axiomatic that when the price of a thing, or the proportion it forms with other things, changes proportionately with all other things, it is a manifest sign that the value of that commodity alone and not the value of other things has changed. Thus, if an ounce of pure gold were worth, or equal to, ten tumoli of grain, fifteen casks of wine, and twelve staia of oil, and if this proportion were then changed so that an ounce of gold were worth twenty tumoli of grain, fifty casks of wine,²⁻³ twenty-four measures of oil, then clearly gold alone would have risen in price; the prices of other goods would not have fallen. Nor can it be said that all three have fallen, because such a uniform abundance of all things is so rare that it may be regarded as impossible. Therefore, it must be concluded that when everything becomes dearer and this is not just a momentary or uneven rise (because though it is true that wars, famine, and disasters do produce a general price rise, this does not last for many years, nor is it the same for all things) then it is money which has fallen. On the other hand, if everything falls in price, then money has increased in price.

To change the common measure of prices is inevitably an inconvenience.

Money necessarily brings these consequences with it because it is the common measure of all things.⁴⁻³ But this is surely not without any inconvenience. On the contrary, as I shall show, it is the cause of serious errors which, however, can only be avoided by finding a common measure which itself never suffers any changes whatever. Among humans, however, this is more easily desired than achieved. Nothing is less to be hoped for

in this world than perpetual stability and firmness for this is entirely repugnant to the order and genius of nature itself. Notwithstanding, nothing is more uniform in its character than the constant return of similar events which, more or less slowly, repeat themselves, within given limits, perpetually, like a given point on the circumference of a circle. The infinitude they do not have in the progression itself occurs in repetition. This is why a constant and immutable measure need not be desired, nor even be sought after. A slow and less sensitive change has been substituted for it.

Such a change as this occurs between money and grain, which undergoes very great changes in its price in a much shorter length of time.²⁻⁴ But from the constant period of natural events one can affirm, almost with certainty, that taking twenty year averages⁴⁻⁴ for the time of harvest today, and as many years in the time of Augustus (given the same population and cultivation of grain) the value of grain in our realm, in periods so far apart, would be precisely the same.²⁻⁵ Metal, on the other hand, has experienced such great variations that a pound of gold, at the time of Augustus, was not equivalent to as much grain as it is now, but to a much greater quantity. Thus, as the price of grain is measured over the centuries, in terms of gold, it is necessary to correct the price of gold in terms of grain. Gold will have its time, just as everything else in nature; but what and how much this will be, given the necessarily vast time span of the centuries is, perhaps, not known and there is no use trying to know it.

As I have said above, a common measure which has little variation may be employed with benefits which are roughly equal to those of a stable one, since a stable one does not exist.¹⁻⁸ Still, there are some individuals who, though wise and large in numbers, are persuaded that imaginary money is a stable and firm measure. On this basis, they exalt and glorify it and would use only imaginary money as a money of account. Others, perhaps more judiciously, believe that, of all the metals, copper is subject to the smallest changes because it is lowest in value. As a consequence, neither the intensity of desire for it, nor its modishness ever increases, anymore than does interest in mining it. Such things are worthy of our attention. I would, then, seek to know whether imaginary money might be of greater stability than real money, whether there is utility in using only certain monies of account, and whether such monies should be real or imaginary. It

would be most beneficial, finally, to know which and how many frauds and unjust complaints are caused by the wrong idea in the public's mind, which holds that money is an invariant measure and that the public does not feel its movements.

That imaginary money is not a more stable measure than real money.

If imaginary money were the absolute name of a number explaining an idea of price, and if this idea were fixed in our minds and separated from other things to such a degree that it was not disturbed by the movement of anything else, it would certainly be invariant and constant. But this will never be. For, our *uncia*, as an example, is imaginary money the value of which is set at six ducats. The ducat, however, is real and mutable, and if the price of the ducat should change, the price of the *uncia* would change accordingly. This has actually occurred. We read that Thomas Aquinas,²⁻⁶ of the Order of the Preachers, who was declared a saint for his angelic wisdom, virtuous work, and superhuman doctrine, received one *uncia* a month from the king of Naples to support him at the public school here.¹⁻⁹ This was reputed to be a large recompense at that time, but six ducats a month is a poor wage today, one proper only for a lackey. In fact, not six but more like seventy of our ducats truly corresponded to the price of the old *uncia*. It is no advantage for imaginary monies that they do not change with the alteration of the price of the real, or with changes in the proportion of alloys the latter contain, or their weight at the new mint. This is a common misconception for many who believe that since imaginary money is not subject to these changes, it is, therefore, immutable. Since it is a mistake to believe that only these things change the price of money, this opinion is likewise erroneous. The true and principal change actually arises from greater or smaller abundance of the metal which circulates in a country. This change does not appear in the coins proper. Consequently, if the prince does not change them, they never do change. Change appears, nevertheless, in the prices of goods in general, and this comes to the same thing.⁴⁻⁵ Price is a ratio, and for a ratio to change, only one of the terms of the ratio need change. If money does not change, then, it is sufficient for the price of what it measures to change.

This situation resembles that of a prince who wishes to alter the measure of length used in his kingdom, without having his subjects feel it. It would suffice, in this case, for him to ordain that the height of his soldiers, which had been fixed at six spans,⁴⁻⁶ be said to be and be reputed, henceforth, to

be twelve spans; and thus, every other measure would be adjusted proportionately. He would have reduced the span by half without ever having laid hands upon it.

What the prince does not do to the prices of goods, the multitudes themselves will do, and with every justification. Since price is a measure of the peoples' labor, it is appropriate for the people themselves to determine it. Should the prince wish to set the price of anything, he would have to conform to the measures of the people, if he should wish to be obeyed. A thing would otherwise either not remain at that price, or its manufacture would languish. In one way or the other, therefore, the prince would not achieve his goal. Hence, to conclude, invariant money is a dream, a fantasy. Every new, richer mine discovered causes all measures to change without delay and without showing any other effect on them but change in the price of everything measured.

What an invariable measure is.

Some will say, perhaps, that if metal has the disadvantage of having a variable price, a less unstable thing should be used. Many are the times I have truly wondered whether such a thing does exist; and I see that there is no product or substance in nature which is necessary to man, except for the four elements, the use and knowledge of which whole generations have been denied in some instances. The elements alone are precisely the things which have no price, because of their abundance. True, every nation has a certain class of staples which forms its primary food and which constitutes, as we say, its grain.²⁻⁷ Rice is an example of this in the Orient; American corn is another; dried fish near the Poles is yet another. It is this sort of commodity that it would appear to be possible to use to form a stable measure, based on its average harvests.⁴⁻⁷ But on noting that the prices of the articles are controlled by differences in cultivation, and that this derives from different persons, everyone can see that this is not possible. In fact, the world has moved so far away from truth and enlightenment in our century, that it seems to be approaching some great end, not too far removed from us. Physicists have succeeded in finding an immutable measure in the marvelous union of time, space, and motion — the three great measures of all things. They have measured time by the course of the sun and found a means of dividing it into equal parts. These parts are measured by the oscillations of a pendulum, by its length, already determined at different places on the earth, and by the velocity of the oscillations. These three great measures

have been joined together with perpetual bonds by the velocity of the oscillation. But no measure has yet been determined for the price of things, or for their proportion to our needs. Perhaps some day one will be found.¹⁻¹⁰

Perhaps man is this fixed measure.

I personally believe that man himself is this measure. Except for the elements, nothing is more necessary to man than man himself. The price of all things depends, moreover, on the changing number of men. It is certainly true that the distance between man and man is virtually infinite. But if an average were calculated in order to arrive at some mid-point, this would surely be the true measure, for men have always been, are, and will always be the same in every way.

The reasons for this opinion.

I believe this is why the people on the coast of Guinea are believed to possess a constant and ideal measure. They count with *macoutes*, which are each worth ten units, and with the *cento*. They usually proceed as follows. They set the price of what they sell, usually a single Negro male, at a given number of *macoutes*. For example, a slave who is less than thirty years of age, of good health and otherwise perfect, is called a *piece d'Inde* and is placed at 305 *macoutes*. Next they evaluate what they wish from us in trade in the same terms: a knife is worth two *macoutes*, a gun thirty, ten pounds of powder thirty, and so on, until they add up to 305 *macoutes*. If the European merchant is satisfied, the trade takes place. Counting is accomplished in this manner at Loango,⁴⁻⁸ on the coast of Angola. Malimeno²⁻⁸ and Cabindo use *pezze* in the same way, each corresponding to thirty *macoutes*. Our merchants even think of these terms as pure abstract numbers which are very convenient for this purpose. Savary,¹ and the author of the book on *The Spirit of the Laws*⁴⁻⁹ held this view. But, to me, the introduction of this abstract number among a people appears impossible, for I firmly believe that everywhere, the money with which payments are made is that used in counting. The truth is, then, that since their principal merchandise is slaves, their money is man. This is an invariable money, one with which it is easy to compute when one values, as they do, only in terms of qualities of the body. Man is valued in *macoutes*, which would be virtual subdivisions of this price.²⁻⁹ It is seen here, from experience, that the most constant value is that of man. The custom of having slaves may be discontinued

¹See "*Macaute*," in the Dictionary of Commerce. ⁴⁻²⁸

but their price will be the least changeable as long as the custom prevails.

Money of account.

That it is to no avail to determine money of account only with particular coins.

To resume my general discussion, and descending to consider money of account, I believe I have indicated clearly how useless it is (in view of the absence of stable money) to determine the money of account by law. Indeed, if the coins of all well governed states were of equal goodness, and if a just ratio were adopted among the three metals, it would not matter how and with what thing counting were performed. On the other hand, if coins were not equal but all circulated freely, then good coins would be used for expressing values but everyone would try to pay with bad ones.⁴⁻¹⁰ Hence, good coins would leave the state.⁴⁻¹¹ To adopt a law requiring that the same coins that are used for carrying on trade should be used for payments, would be the same as suppressing the bad coins. If no new coins were made in this case, the state would remain without coins. Thus, to base the money of account on the new coins would be useless and futile. For the lawmaker to make such a law simply in order to provide himself with an opportunity to change the value of the coins which are not money of account, is for him to plan badly and a poor and disastrous policy. There can be cases in which raising all the money, or all the coins of a particular metal, will not be harmful; but there is never a case in which changing only a part of the coins of one metal would fail to be harmful, or be profitable. True, since virtually no nation has adopted gold coins as a unit of account, it will be thought that the value of all this metal could be augmented without affecting the accounting unit. But it is not necessary to make laws in order to do so -- quite aside from the fact that gold coins, of all coins, should never be tampered with. Because, when the supreme authority augments the coinage, he will have to be the first to violate it, if he wishes to make a profit in this manner. But the state should be constrained by the very same money in which she has required her subjects to keep accounts. Since such coins have not been tampered with, the state should require payment in them, the price of which had been raised, or which were acquired by reminting. Thus, the law referred to above, which the sovereign was the first to violate, shall have been abided by no one. The difficulties that would result will be discussed at some length, when we take up the augmentation of the currency.

This is confirmed by

All this will be understood better if we reflect on events which occurred in France. In the celebrated

France.

assembly of that state, at Blois, in 1577, Henry, the Third, prohibited the ancient practice of counting in *livres, sous, and deniers*,⁴⁻¹² and substituted that of the gold *écu*.⁴⁻¹³ The reasons for the edict had been revealed in a report of the Royal Monetary Court,⁴⁻¹⁴ which report was released with the approval of the king. These reasons are as follows: I. the prices of things had risen excessively; II. less money was being received from foreigners who bought merchandise produced by France; III. some coins, the prices of which had not been increased by the augmentation of the currency which occurred, had been raised by the tradesmen of other countries; IV. much of the income from leases⁴⁻¹⁵ and ground rents,⁴⁻¹⁶ stated in terms of coins, was lost; and V. the king lost much of his income.

*Considerations of the first chapter of the complaints of the Royal Monetary Court at Blois.*²⁻¹⁰

What a sensible man might think about this edict will shed some light on the whole science of money. First of all, it is seen that this representation reveals the damage done by the augmentation of the currency. But this is not related to, nor can it be related to, the money of account. It would have been more reasonable to ask, instead, for a diminution of the currency,⁴⁻¹⁷ and not for what the edict imposed. Nor is this to say that computation in an invariable money was sought, or that one tacitly pursued by this means some remedy from the evils of the augmentation of the money. Because inasmuch as there is no such thing as a constant money, one would be following a shadow. The new law of Henry, the Fourth, which abolished the latter, showed that its intent was not achieved. Moreover, everyone believes that imaginary money is more stable than real money. Even the Royal Monetary Court requested a law to transfer accounts from imaginary *livre* into real ducats,²⁻¹¹ in order to render the unit of account invariable. This is surely a strange thing. But it is no less strange for stability and security to be sought in proclamations and ordinances, which is precisely where they were sought. Had they been looked for more diligently, they could have been found in the nature of things and nowhere else.

Considerations under the second head.

In the second place, the complaints against the augmentation of the currency are not even all true. The first, which is more general, is only worthy of a light smile, because it is not true that things are more dear after an augmentation of the currency. For their prices rise in name⁴⁻¹⁸ only and not in fact, for the reason that the rise is only nominal; moreover, names which change money also change the prices of

goods to the same extent. This calls to mind a man who once had to pay 100 ducats for something he desired and was later required to pay 200 half-ducats for the same thing. This distressed him, because whereas first he heard the sound of the number 100 he now heard the other, to him more frightening, 200. But it is evident that when one buys dear he also sells dear. Therefore, to mourn the fact that prices have risen is also to mourn the fact that things are selling at a better price.

Considerations on the third.

It is not true, either, that foreigners gain by it (which is the third source of complaint). Foreigners are not sovereign in other states; moreover, they are subject to prices adopted by the nationals of a country and to the same changes of names there. In other words, whatever the denomination, a person must relinquish the same weight in metals as any other. But I will return to this later. For now, it is sufficient for me to comfort the reader with a smile and a warning that price increases directly destroy every effect of an augmentation in the value of money, thus maintaining the reality unchanged and silencing all voices. For instance, when the French regretted the fact that everything was so highly priced, they were regretting the fact that the augmentation of the currency, so abhorred, had failed to have its effect, and this makes it appear as though they wished to enact another. Surely, if the representations of just a few people can make a nation guilty, then the nation would have deserved this as punishment.

Fourth, not even the fact that some coins were not altered by law, but by the people, was a just cause for complaint. Because: I. it is not possible that this could have been brought about by foreigners, for they conduct very little trade in France, which is a naturally rich kingdom; II. because this could be done only if it were consistent with nature. For, it is a true maxim, confirmed by the experience of all centuries, that human transactions are always inclined to follow a natural and just course, or to deviate from such a course as little as possible, just as, on the other hand, the constitutions of those who would govern well, torment and outrage them. If they had as much force in them as the harm they contain, they would be capable of putting a state into disorder. But Providence has endowed the very laws of nature with an infinitude of power for self preservation, power which destroys and undoes anything which opposes it. This force in society may well be called a moral elasticity which I shall discuss again, when I examine the ultimate content of the representation. At that time, it will be

seen that it is either not true, or it does not produce any harm to the entire state. Meanwhile, it may be concluded that whether the harm seen in it is false or true, nothing can be cured by fixing the money of account.

Edict of Henry, the Fourth.

We will proceed, next, to a discussion of the edict of Henry, the Fourth, of 1602, which annulled the edict of 1577 and restored the *livres, sous, and deniers*. The reason given for this change is that the other unit was the cause of the expense and excesses that were observed in everything, and of their becoming dear.⁴⁻¹⁹ These are the words of the edict and this explains why the account, in ducats,²⁻¹² was banished — with terms of imprecation and abhorrence — in favor of the older unit. This ordinance demonstrates nothing if not that those which were then higher in France were not at all above the others. What is said about it cannot help but come from one who lives in the shadows of the greatest obscurity, insofar as the art of governing is concerned. Superfluous and sumptuous expenditures are the faithful companions of peace and of a prosperous state; rising prices of things are an infallible sign that a nation is flourishing. And this was all due to the wisdom of a most virtuous king.

To sum this up, the Royal Monetary Court caused Henry, the Fourth, to issue an edict against his good government. The inconsiderate voices of the multitudes forced him to provide a remedy for what were, in fact, the infinite services he did for France, which properly honored him because he was her father and restorer. It is fortunate that the remedy was not less frivolous than the imagined evil. All this is understood from the fact that although France was growing in wealth, she saw the oppressive superfluity of expenditures continue to grow still more.

The motives for this edict.

Should anyone ask what the manifest reason for this edict was, I should have to reply that even after some thought, I have barely found it. I first observed that when one is in pain he rarely determines the correct cause of his discomfort, always blaming the most recent cause in his memory, the most recent thing that has happened to him. In the same way, the French, perhaps, still remembering the *livre*, the old unit of account, and the great care with which Henry, the Third, had prohibited it; and not happy with the state then current, which is in the nature of people (who are quick to hope for more than is due them and to suffer less than is necessary) attributed every fault to the unit of account at the time.²⁻¹³ With the greatest ardor to

see it annulled, they became so infuriated that the king was constrained to satisfy their desires by some change, a change which, *per se*, contained nothing which was either useful or damaging.

Is it true that the greatness of the money of account may be an index of the wealth of the people who use it?

In the second place, it may be that what was believed at that time, is what I myself have heard many people repeat: namely, that the great value of money in which a nation counts is an index of the wealth of that nation. I believe this general maxim derives from the fact that the English are very rich these days, and from the coincidence that they enumerate in pounds sterling, the greatest unit of account used by any nation.⁴⁻²⁰ In order to understand how wrong this maxim is, however, it suffices to turn back to the examples of history. It will be seen that France, a vastly potent kingdom, has always enumerated in *livres*,⁴⁻²¹ a rather low unit. Genoa and Venice have done likewise. Holland has used florins. Even more important, Spain was at that time the greatest, and consequently, the richest power, and counted with very small *maravedis*.²⁻¹⁴ But this diminutiveness of coins does not contribute anything to parsimony because, even today, when high prices are needed, the French use *louis d'or*; Spain uses *pezze* and *doble*; Florence uses florins; Genoa and Venice, *zecchini*; Germany, *tallari* and *ungheri*; and Muscovy, *rubli*. This can be understood even better by what occurred in ancient Rome.

Rome used *sesterzi*, the smallest coin, as money of account and this was never changed. But after she rose to such power and wealth that one heard everywhere of thousands of *sesterzi*, the word thousand became mute and, at once, the greatest money of account that was ever used anywhere was found in use. This coin corresponded almost to twenty-five of our ducats.²⁻¹⁵

So much for imaginary money and money of account. I will now take up some errors which were introduced by gradual changes in the measure of things, that is, of money.

What I am about to say is worthy of the deepest thought. If my thinking cannot approximate the vastness of the subject, if I should falter under its weight, I, at least, flatter myself to think that my readers can carry the subject from the point at which I leave it, to its conclusion.

The considerations of false complaints arising from

Popular complaints constitute a great enemy of the successful operations of the prince. This is not because such complaints are always unjust, but because it is not always wise to heed them. Such outcries are like the groans of the ill, which should not always

a misunderstanding of the intrinsic price of the metals.

serve as a guide for those who treat them, because often it is not the illness but the remedy itself that is painful. This is why the supreme powers, to whom is entrusted the medication of the body politic, must diligently investigate the origins of the protests of their subjects and the most appropriate cures for them. More specifically, to prevent what pertains to money from falling into error, it is helpful to demonstrate what experience often teaches. Not everyone realizes that money is not an invariable measure and, as a consequence, many rash discourses which government officials heed, actually arise from among the people. Laws and statutes are thus promulgated, which are more and more violated and despised, the less they are considered carefully enough (they are sometimes actually opposed to nature). The principal errors among these can be reduced to just four: (1) while a country is enriched, complaints of famine and misery are heard, despite the fact that famine and misery are not seen; (2) modern nations envy those of antiquity which, by comparison, actually merit contempt²⁻¹⁶ or compassion; (3) it is sometimes believed that the prince is raising duties when he is actually doing no more than setting them equal to ancient duties, which have since been reduced; (4) what should be called opulence, tameness, industry are criticized as luxury, lassitude, or ignoble arts.

False complaints of famine during prosperity, and good government from which they arise.

As many wise men have said, man is by nature an insatiable animal and, as a result, he is always a complaining and fastidious creature. It follows from this that he always sees the worst aspect of things, for which he accuses and censures Providence, as well as his peers, or even himself. Whatever his state, he is always discontented. His deeds do not correspond to his words, and he should be judged by facts²⁻¹⁷ and not words. On this basis, I have established this fundamental maxim: however much man is as unjust, unreasonable, and inconsiderate in his words, he is just, stable, and wise in his deeds which, unbeknownst to him, rarely conflict with reason and truth. For example, in order to determine the best country in which to reside at any given time, one should not listen at all to what anyone says, but should observe where men go, leaving their homeland behind, to establish themselves and raise their progeny. This would be the best country in which to live. Although these immigrants cry over the land they have left (as many are heard to do among us) they would deplore the poverty of their children more. But as long as they do not return to their native land, or remain without a wife, it is not necessary to heed their plaint-

Continuation of the same subject.

Nor is it necessary to pay any mind to the complaints of misery. As a country's industry grows, it becomes more and more a creditor, less and less a debtor to neighboring countries. In due course, after it has provided itself with enough wares, it uses the remainder to draw money to itself. As the quantity of money grows, as the proportion of money to other things changes, everything appears more dear. But, as wares become dearer, wages increase as much, as does every other gain. Everyone complains about this rise in prices, just as they would complain about a shortage. They do not appear to perceive the increase and greater facility of acquisition or to rejoice in it, so insatiable is man's greed; they only complain of the expense, as though their money were being passed on to foreigners, and not to their own fellow citizens.²⁻¹⁸ These voices -- which truly are not from all the people but only from those who believe they know more than others, speak more and instruct those who do not know how to speak as they do -- have often been able to influence those who govern, so much that proclamations have been issued and laws made which run against prosperity, and thus increase misery.

Stupidity of the vulgar eulogy of a country, in which provisions are at low prices.

I recall having often heard people who have wished to exalt Rome over Naples, turn the entire thrust of their arguments to show that prices of all things are lower there than they are here. (I will not examine the truth or falsity of this assertion here.) Such people fail to realize that in demonstrating this, they will -- in the end -- have discovered the inferiority of Rome.²⁻¹⁹ They can, for example, be left speechless simply by asking them whether they realize that every sort of thing is much cheaper in the cities of the Marches and the Abruzzi than in either of the two capitals, and that on this basis, the villages of these regions are to be preferred to those of either Naples or Rome. After all, Rome always remains proportionately mid-way between Naples and the Abruzzi. Indeed, such errors are so diffuse that they are even nurtured in the minds of the most knowledgeable. These are not much different than those who boast of: the abundance of dairy products in Rome; of artichokes, game, and uncultivated meadows; of the fruits of thorn bushes and the animals of the woods -- as a distinct honor to the countryside around any capital.

The greater value of things is a sign of good

They should be saying, instead, that the better value of things is the most secure concomitant for understanding where the greatest riches are. And these are drawn there by secular men, for men go where one

government.

lives better. This is how one can determine where the best government is and also where happiness is to be found. In other words, it is a credit to London and Paris that everything there is more dear and that these cities do not grow any smaller as a result. This is the quality which shows that our century is an improvement over times past.

Why the existence of a high price is associated with a dearth of goods.

In order to discover the source of this common deception, one must note that every disaster causes the prices of things to rise. There are two different causes for this. One increase dries up all the money in a place; another increases it. This is because in such disasters -- which are no more than a shortage of native products -- a country takes where it does not give. Money leaves such a country. In periods of prosperity, on the other hand, the greater industry of a country causes money to enter it. In this case, higher prices are useful, because they bring more money into the country. For example, the manufactures of England, which are so perfect, are bought competitively by all and draw money into England. If people could live there at a lower cost, things would be valued less. But then less money would be attracted to them. Therefore, it is an advantage for prices to be high in England.

The difference between a rise in prices due to some disaster, and one due to prosperity.

To distinguish an increase in prices due to some disaster from one due to prosperity -- which is most useful information for those who govern -- the signs are the following.

A rise produced by famine is of short duration and is accompanied by a great depression.¹⁻¹¹ That of prosperity is constantly and enduringly increasing. This is because in years in which war or pestilence or the intemperance of the seasons takes a harvest, the number of sellers is reduced, compared to the buyers. Consequently, prices rise and many become impoverished. Once impoverished it becomes impossible for them to buy anything, and they either remain abroad, or if they are not already there, leave the country. The number of buyers is reduced in either case. The same is true for the number of sellers, who also have need; sometimes a very great need, to sell. The latter sell at whatever price they find, and this is what causes prices to fall. But poverty and misery remain. Moreover, when the people of a country do not pick their own fruit, fruit must be brought in from outside; this expense must be paid for with money which, consequently, flees the country, after everything has fallen in price and once money has -- because of its scarcity -- become dear. In prosperity,

on the other hand, rising prices result from a greater circulation of money. Because this is not different from abundance, it not only endures, but also attracts people from abroad in the hope of gain. This brings new wealth with it and because of the abundance of money⁴⁻²² causes prices to rise even more.

Explanation of two events which are strange in our realm.

This seems to be a fitting time to explain the reasons for the two events which, though not rare, appear strange. The first is one which was observed among us not too many years ago. Little grain had been harvested that year; all expected this to result in the highest price for grain. But, unhappily, the olive crop was ruined at the same time. As a result, instead of rising, the price of grain fell, and remained at this level for as long as moans and complaints of famine were heard from every side. The reason for this unforeseen incident was that, once a principal branch of industry had failed, an infinite number of people could not find work on olives. Thus, they remained very poor. The poor cannot pay a great deal for things, even if they should wish to. It is for this reason that the sellers of grain, who were not less needful, accommodated themselves to the power of the buyers, rather than to the smaller harvest. The contrary event had been experimented with that year, which had been extraordinarily fruitful of all things. Very low prices were expected, but they were never seen. This was caused by the same abundance which, because it provided everything, banished all need. Those who have no need do not sell, but hold back their wares for a better time; as long as there are not many sellers, prices do not fall. Thus, to sum up, scarcity sometimes brings low prices with it, and plenty high prices.

Conclusion.

To conclude, I pray my fellow citizens will inform themselves of the truth, instead of being deceived by words. I pray they will take comfort in the presence of their own king, who has caused the prices of things among us to rise steadily, and has introduced that magnificence of expenditures which is born of opulence and of a rapid turnover of money.^{4-23, 2-20} I pray they will look again, though not with envy but rather with contempt, at that unhappy time in the province when the prices of foodstuffs were lower because money had been absorbed by a distant court. I pray urgently for those who tend to our provisions, so that we will not be left prey to the careless words of a populace which turns unemotionally and stupidly against itself and against its peers, hoping to find the proverbial pot of gold, but only finding more poverty; that they will not want -- in put-

ting prices lower than is proper -- to oppress an innocent part of the public, simply engaged in feeding itself, and to destroy their moderate gains, and send them into poverty and hunger -- by allowing misers to save that money which to others is good only for spending and for otherwise disbursing.

The error of believing that the excises of centuries ago have been increased.

The third error is even more pernicious than those I have already taken up. This error causes the prince to be unjustly accused of tyranny and it implies that he raises duties every day, which appears oppressive to the multitudes -- even as slavery. Many times this increase is illusory. This is why. Taxes should only be determined in terms of a certain quantity of money, always proportional to the prices of merchandise and to the needs of the state. These things are the recompense which the sovereign gives and it is appropriate to increase this recompense by the amount by which money increases. As the prices of things rise, the proportion between the value of things and the excises on them is no longer the same. This compels the prince to raise taxes, in order not to fail, and in order to achieve the new proportion. Consequently, this is not a true increase; it is simply a matching. At the time of Alfonso,²⁻²¹ all of our taxes were abolished and reduced to fifteen *carlini a fuoco*.⁴⁻²⁴ Today, besides taxes, we pay fifty-two *carlini a fuoco*. Fools long for those days. The present is painful to them. What wretches! Evidence can be provided to show that money is at least seven times cheaper now than it was then;¹⁻¹² fifteen *carlini* of those days are worth more than one hundred *carlini* today. Is it any wonder then that duties have been added to the customs *del fuoco*.⁴⁻²⁵ Without these, the kingdom would not be able to meet necessary expenses; an imperceptible change in intrinsic value can do this much. Just how serious this fraud had become in the minds of many, is known from the violent public tumult of 1647, when the multitudes inconsiderately demanded that the new taxes be abolished, leaving only those of Alfonso, the first, which were confirmed by Charles, the fifth. Nor were those foolish ideas any less to blame for a demand which contained the damage and ruin of the very same persons who demanded it. Certainly, the tearful misfortunes of this wretched reign did not then arise from the duties which were used to satisfy the true needs of the Spanish monarchy,²⁻²² but from very different causes, which there is not time to enumerate here.

But I have, bit by bit, come to a discussion of excises, despite the fact that this will be discussed more

more fully in another comprehensive work, *l'Arte del Governo*.^{4-26, 2-23} Nevertheless, I would not wish to continue without saying something about excises which is relevant for the present subject.

DIGRESSION ON DUTIES. THEIR NATURE AND WHY THEY ARE SOMETIMES HARMFUL.

A duty is a part of the possessions of some private individual which the prince takes and then disburses. If duties were returned to the same people who paid them, then even if personal property were distributed equally among all, the duties would neither hurt nor help anyone. In other words, duties are by their nature neither harmful nor beneficial. However, if a duty were not returned to the one who paid it, then it would hurt some and help others.

*Why duties are harmful.*²⁻²⁴

Again, if those to whom it is given should be the honest part of a country's people, then evil persons would be punished and good ones rewarded by the use made of the duty. Therefore, the use of excises can, per se, be completely and infinitely useful. Moreover, taxes do not interfere with this advantage; rather they complement it. This is because the reward of the industrious and honest becomes greater the more harsh is the pain suffered by the idle, troubled, and undeserving. Therefore, duties are not bad simply because they are heavy. They are bad for three other reasons. These are: (1) either because they are not universal, or (2) because they are levied improperly, or (3) because the proceeds from them are used and distributed badly.

In the first place, the slothful are not provided with enough incentive, the deserving are insufficiently rewarded, and the state carries a lighter burden with much greater discomfort, like a horse carrying a load which is suspended primarily from his ears. Should the horse stop, he would have no way of preventing himself from toppling over. Such a disparity is most common in taxes which are badly regulated, and this was common during barbarian centuries. They can sometimes be levied badly and, when they are, they can interrupt industry, and this gives rise to many evils which words cannot adequately explain. Everyone can see that if a prince takes half the possessions of his subjects from them, while granting them freedom and convenience to buy, he impoverishes his subjects less than when he takes a smaller portion but, at the same time, takes

the means of acquiring anything at all from them. In this way, if you were to remove from a horse the strap by means of which he easily pulls heavy loads when such a strap is fastened around his breast, and were to fasten it around his legs instead, then the strap itself, to say nothing of the merest burden, would render the horse immobile or drive him to the ground.

When duties are employed badly.

Finally, the ruin of a state results from the use of excises which are used by the prince to reward kings, the undeserving, and the lazy, even if these just remain exempt while honest people are forced to pay them. Likewise, if taxes are consumed outside a state, or if the proceeds from them are given to foreigners, the same result occurs. By foreigners I mean those who live outside, or who come into a country simply in order to enrich themselves and then leave. But those who are born outside a nation and then come to establish themselves in it, deserve our love and care more than the native-born themselves. Indeed, countries which attract the most foreigners will be more powerful and happy than other countries. Marshy Holland, for example, which was once miserable, owes all her power to such foreigners. Prussia owes her strength to immigrants; likewise Muscovy, for her arts and culture. These are the primary reasons for the opulence which Naples is experiencing today, after having seen that whereas too few immigrants once impoverished her, many which come here from all parts make her prosperous. Though earning their wealth here, the former take it away from us, virtually like so many streams which carry it away. The latter enrich us, not only with their own gains but, by their paternal and ancestral legacy, which as in the case of so many rivers is brought to us from afar, to be spent here, and thus disbursed widely.²⁻²⁵

It will be seen that large and small alike produce directly neither good nor evil, though they might have either effect. From this, one realizes all the more that complaints of increased duties are unjust, since they are either illusory or, if real, are never harmful when considered by themselves.²⁻²⁶

The means of and signs for a state's decline.

Before concluding, it would be useful to describe the means by which a state falls into ruin. This is how true evils are distinguished from false ones. The wealth of a state consists of land, houses, and money (because pastures produce no other fruit, livestock is counted as fruits of the earth). Man brings all these riches into being, and then consumes them. It is he who proclaims them riches. Thus, it will not seem

strange if I regard man himself as one of the true riches, inasmuch as he is uniquely and truly wealth. Of these things, which are four in all, the first two are immobile or real property, the other two are personal property. But it is easier for money to go abroad than it is for man. Because in leaving, money causes other wealth to enter in its place, wealth consisting of many commodities useful to the state,²⁻²⁷ though the state is impoverished by this. Man, on the other hand, always leaves part of himself when he leaves, because he leaves behind him: land, buildings, relations, honors, and his entire homeland. He can only take money with him. A person who longs to leave a country cannot sell the buildings and lands which remain and, at the same time, convert them into equivalent money. Man is, therefore, less mobile than money; lands and buildings are all immobile, as far as their transfer is concerned. The latter can only be erected, and ultimately collapse; the former can be cultivated and may become sterile. This is the only sort of mobility that this type of property can have. A state loses all of its wealth when money (in which I include all precious personal property) goes abroad. Men either leave a country when they depart, or they let death extinguish them without producing any offspring. Factories and the like go into ruin; land returns to a savage state. The order of these things in the future is precisely as I have described it here, which is what nature requires in accordance with their different degrees of mobility. Famine is caused by all this decadence. Famine sometimes results from the intemperance of the seasons, though this is a minor reason for it. For, except in some rare instances, bad seasons do not endure anymore than three consecutive years. If they seem to last longer, it is because past calamities, impoverishing the country as they do, have caused many to hesitate to seed much land. Without seed there is certain to be no harvest. Famine also comes from human pestilence. But this punishment, as it is understood from experience, is not less to be attributed to divine wrath than to human negligence. However, good husbandry renders it more rare. Even pestilence among bovine animals causes famine which, almost as compensation for the plague which has come to be checked, has come in this century, frequently finding us without knowledge of how to defend ourselves against it. But war, the greatest of all calamities -- indeed, all others can be grouped under this heading -- is the most common cause of famine and of the ruin of countries. Because it de-

rives entirely from man, it is an evil for which there is no remedy, for man knows less about controlling anything, than he knows about controlling his own passions.

Until money leaves a place,²⁻²⁸ men do not abandon it because they do not yet feel a need to leave. But when money has for the most part left, and the country promises nothing but sorrow and misery, men begin to leave that country too. The first to leave are merchants and artisans, and they leave least behind. One by one, others follow after them. Those who remain are prevented by poverty from taking a wife, and accelerate the depopulation as they die. Besides the reasons already cited, a small amount of procreation results either from the cruelty of government, as in the Orient; from the disproportionate distribution of wealth, as in Poland; from superstition, as in Africa, where wives barbariously accompany their husbands in death; or from other barbarous customs, as those in countries abounding in harems and eunuchs.²⁻²⁹ When men are reduced in numbers, a state has no way of preventing ruin; only slavery and invasion by external foes can destroy a country more rapidly.²⁻³⁰

A general price rise is the first sign of decline and is similar to that of the prosperity of a state.

As for the signs of misery, you will note that none resembles that of a prosperous state as this does. In the beginning of such disasters, money surges out in greater volume from purses in which it has been held. As a result, all things rise in price equally as in the increase which occurs when money enters in a great flood.⁴⁻²⁷ But after this, every sign changes and, in this adversity, follows the course described above, going against the very happiness of the people. If one really wishes to see these signs he has only to look for them in our own kingdom, which today shows them all. This is not due to the virtues of the people, but to the prince. Subjects never deserve credit for promoting whatever industry they have, nor are they to blame for their slothfulness and laziness. It is not necessary to agree with the common expression which sometimes accuses the entire nation of being vicious, slothful, and evil. The blame is not theirs. For this is the nature of the subjects after they have obediently and uselessly resisted bad government, armed with stupidity alone. And this rock, although in the last resort the most secure and impregnable, renders subjects no less useless to the prince than if they had rebelled, and the prince no weaker than if he had no subjects. Experience has shown that man is stronger in suffering than in prosperity. And as between the oppressed and the tolerated, the oppressed cede sooner. Inertia, too

has its conquerors. In addition to ancient history, which is filled with opinions such as these, this truth is also seen in the Americans who -- with their insensate brutality, quite different from their ancient prudence²⁻³¹ -- have wearied and tamed every art of the Europeans. Thus, they have in some manner been reduced to that yoke which their unsuspecting virtue has not been able to break. From this it follows that an oppressed nation is fearful because of frequent conquests, both good and bad, which it has sustained. It becomes so irrational that it is necessary to use force in order to do anything useful for it, just as it is necessary to use force in order to heal the wounds of a dog, who is frightened after he has been half clubbed to death.

It suffices, then, to have said this much concerning the deception which ignorance of the movements of money gives rise to. It is now time to think of such movements more specifically, and to discuss coins and the various metals of which they are made.²⁻³²

CHAPTER 3

COPPER, SILVER, AND GOLD MONEY.

The utility of having a variety of metals of different values.

That the convenience of money is increased by the use of a number of metals of unequal value is quite easy to understand and does not require elaboration here. For, if one measures on the basis of commodity content alone, precious metals cannot be used to measure low prices because of the excessively small parts into which they would have to be subdivided.²⁻¹ Base metals, on the other hand, cannot conveniently be equated to high prices because their mass would necessarily be so great as to be unwieldy. Thus, Licurgus,⁴⁻¹ for example, adopted the best means for achieving his ends -- to keep the Spartans poor -- however wise or spurious his plans might have been,²⁻² when he allowed the Spartans to have only copper money. I believe that the Americans, on the other hand, did not use money because they did not know other metals than the precious metals. But if it is true that this diversity is so beneficial, it is also true that often (because human affairs are always a mixture of good and evil) it is the cause of serious harm. To determine the proportion between these metals without sufficient consideration can impoverish a state, depriving it of one or two of the metals, leaving it with one alone, and without recourse to any remedy, which -- as I have already said -- is a remedy used in so troublesome a fashion as to be virtually useless.²⁻³ But, Book Three contains many disproportions of this kind. Hence, I shall now turn to a discussion of the values of each of the three classes of metals. Coins of two metals,²⁻⁴ called velon,⁴⁻² will be taken up in Chapter 6, a more appropriate place for such a discussion.

Considerations on our

Pure copper circulates among us today in six different coins: the *tre cavalli* (a name taken from the

copper coins. coin called *cavallo* which, of course, corresponds to a third of the *tre cavalli*, and which took its name from the impression placed on it by Alfonso, the first, of Aragon);²⁻⁵ the *quattro cavalli*, the *sei cavalli*, or *tornese* (named after the city of Tours, in France, whose mint gave its name to the *lire*, and the *soldi*, introduced among us by the Angevins);⁴⁻³ the *nove cavalli*; the *grano*; and the *publica*, which is worth a *grano* and a half and, which is taken from the legend associated with the *Publica Commoditas*.

Copper money is the most useful.

The utility of copper (under which I understand all four inferior metals, since what I say of copper can also be said of iron when it is used as money) is much greater than the others. Should other proof not be convincing, it would suffice to note that there have been entire nations which have not used anything else. These include, for example, Rome, Sparta, the Saxon peoples, and the ancient Franks. But no nation that has understood coins will be found without base metals. The fact that the Turks have no money lower than the *aspro*, which is a pure silver coin, cannot be cited in contradiction of this statement because the color given to copper by a small admixture of silver does not alter its nature. Nor should vellon coins not be distinguished from copper coins. Hence, because copper money is lowest in value it is the most useful money; and here, reason confirms and demonstrates what experience also shows.

Its principal utility.

Many things will surely be found that do not have a greater price than a *quattrino* (i.e., a *tornese*²⁻⁶) and no one will contradict me and contend that it is impossible to express this price in gold because that would require a grain of gold no bigger than a grain of sand.²⁻⁷ Nor is it of any use to assert²⁻⁸ that if this gold were alloyed with some other metal, it would become a mass more sensitive to the touch, because to say this, is to take the necessity of the base metals for granted. It would not help to mix gold with anything when the base metal has a value by itself and can serve as money as such. If it were possible to mix gold and melt it down with something of no value whatever, such as stones or dirt, then this union would pay. But aside from the fact that it is not possible to do this, the operation of extracting the acinus from gold costs more than the material itself is worth, and this makes it impractical from every point of view. The same can be said of silver. Yet there is no value expressed in gold that cannot also be expressed in copper. Thus, for example, if we can express a million in

terms of gold,²⁻⁹ we can also express it in terms of copper, if we should want to do so. I do not deny that this will only be possible with greater difficulty, but when all is said, how great a difference is there between most difficult and absolutely impossible? This is the difference between the utility of copper and the utility of gold. And this is a great virtue of copper.

Secondary utility.

Another virtue, not much less than that just mentioned, is that it is less subject to fraud and cunning; that it has a monetary use; and that it is readily traded in good faith. Men do not approve of small and difficult gains which are surrounded by great risks. Sovereigns use nothing but the precious metals for the great sums they pay and receive; they never think of using copper. Nor would those who administer the mint ever defraud their prince by using copper alloys²⁻¹⁰ in order to gain some profit, because copper would have to be used on a very great scale and this would be too obvious. Finally, people are unaware of the defects of this money, nor do they gain any particular comfort from its intrinsic value, because when there is no fear of fraud, the effects of time and use are negligible.

Thus, no one would be embarrassed by the copper coins with which he might be paid, whether they be complete or deficient; nor would anyone put full weight coins aside to pay with worn and corrupted coins, as he would with gold and, sometimes, silver coins. This type of transaction is so ubiquitous that one can see coins among us which are of greater weight, worth half as much as coins weighing less. The negligence is so great that even representative money -- coins made of leather -- appear to have been clipped. And it is necessary to say emphatically that the disorders of our kingdom might have reached an incredible magnitude if the falsification of copper in the last century had not been corrected with many specific laws. To make such a petty gain, it would have been necessary that the wicked be free of any fear.²⁻¹¹ History reveals that this is truly the case, as do a large number of laws made against them, the volume of which, however, always bears witness to their ineffectiveness.

If this were so it would have been helpful for copper money to be used as the

Because copper has this quality, many would infer that it would be useful to use it as a numeraire for money. Such people are certainly thinking more clearly than those who unjustly admire²⁻¹² silver imaginary money as a most useful institution. But I do not know if even copper could attain this distinction. Like the Spanish, who count in *maravedis*,²⁻¹³ we would adopt the

numeraire.

It is here demonstrated that it is not. The first supposition.

method of counting by *grana* and *tornesi*. They should only see good from it. Allow me to begin by asking, first, whether the value of a ducat, in terms of *grana*, would be fixed by law? If the answer is in the affirmative, it is evident that this invariable money of account would be weak, because any time a ducat is worth 100 *grana*, then counting with *grana* or with hundreds of *grana* is all the same. It is not apparent that anything would be gained simply by using some particular word to express this 100 *grana*. The word *ducat* has a beautiful sound, which is neither harsh nor difficult to remember. Therefore, why shouldn't it be used? But if a law making the ducat invariably worth 100 *grana* were adopted, it would make silver the money of account, and not copper. But I have already shown that the value of silver is a changeable value. And as long as copper is legally bound to silver, it will follow it in all its changes. Nor can one assert that because copper does not have cause to change its value (because no greater quantity is either used or mined) it should not follow the events or changes of silver, which have occurred either because new mines have been discovered, or because of new fashions or new laws by the prince. And yet, as long as a law ordains it copper must also succumb to the law, if the law is not to be violated. In this state of things, which corresponds to an augmentation of the currency, either the law would have to be changed, or one of the two metals would have to flee the country. But this would be contrary to what was agreed to from the start, that is, that the proportion between silver and copper be fixed. The same would have to be said of copper as compared to gold. But, in this case, as long as copper is used as the money of account its value will be kept fixed in terms of the other metals and no profit would be gained from it. And this is well known.

Second supposition.

But suppose that no such proportion were established between the metals. Although there are not examples of this situation among other nations, except for the Chinese (who can be said to mint only copper coins,²⁻¹⁴ while silver and gold are bought and sold like all other things) it would still merit examination in order to determine whether it has intrinsic utility which would make it praiseworthy.

I note that an infinite number of people err in believing that value is an internal quality of things and not an extrinsic relationship -- which is what it is -- that varies according to person, time, and place.⁴⁻⁴ This is why they speak of the values of silver, copper, and gold as something stable in these metals, while

failing to say with respect to whom that value exists and to what other things it is compared. This makes as little sense as speaking of high and low without explaining the point from which one measures. In order to discover the source of this error, I would caution that it is only because men have measured one metal with another and stabilized it by the authority of law, that we are able to speak here of value as a fixed and known attribute and of absolute -- not relative -- value. Indeed, when one asks how much a ducat is worth, one does not reply that it is worth so much grain or wine -- because, although this might be a fitting reply, it cannot be given, for such a proportion has not been fixed. One says instead: it is worth 100 *grana*. Though not better than the first, this reply explains only the proportion between copper and silver, which -- because it is fixed -- generally appears to people to explain the value of the metals which, in turn, causes them to speak as though the value is known and universal.

The disutility of fixing copper money by counting.

Now in the event that the law should not fix such a proportion, the metals would not have different relationships between them than grain and wine have with silver. Not only would counting in terms of copper not be convenient, it would be more inconvenient than counting in terms of gold. Because after determining the count, it would remain to be determined how many copper *grana* are worth one ducat. And this would always be a fluctuating and variable proportion. Moreover, since it is necessary that large payments be made in gold and silver, it would be useless to use a copper standard. The powers of nature would cause an imperceptible return to counting in gold and silver.²⁻¹⁵ Thus, in conclusion, to count in terms of copper would be the same as counting with wheat or wine; and it is not possible to select just anything one wishes to serve as the money of account; it will always be found that the unit of account and that in which one pays are the same thing, whether one uses goods or metals for the purpose.⁴⁻⁵

It is not always wise to make copper unresponsive to the augmentation of the value of money.

One might well ask whether it is always better to compute with copper in view of the fact that it is more secure against frauds of counterfeiters and importunate augmentations of the currency? I would reply that frauds do not change computations in any way; frauds are committed more on imaginary than on real money. It is not true that copper may not experience a rise in price. If it were, it would only be precisely because it was not used as money of account. It is more ridi-

culous to wish to prevent the determinations of the supreme powers by means of arbitrary customs. Indeed, nature itself does not repress them even when they are contrary to her, rather it eludes them instead. When it pleases the prince to augment the currency -- or if this is otherwise necessary -- and if this should be impeded by a copper unit of account, then the first thing that would be done is to change the unit of account -- and this is the shallow dike through which we are carried away.

It is not true that the price of copper coins cannot be augmented and diminished.

But it is wholly false that copper coins cannot experience increases or decreases in price. I am astonished that this erroneous opinion is held by so many when, patently, to raise⁴⁻⁶ and to lower⁴⁻⁷ are relative terms. For example, when the price of silver is raised, what other price is lowered? It is not the prices of provisions, nor those of other commodities whose prices are at the mercy of the sellers. It is the prices of copper and gold which are lower. Thus, whenever silver is raised, copper is lowered. But this can be discussed better elsewhere. Now it would be useful to examine the ills of copper among us, when copper is used as money, and to discuss what laws would be useful or necessary in this case.

The present state of our copper coins.

Copper coins are the first to be suspended among us. For example, none were minted from the reign of Phillip, the fifth, on, or for about fifty years. And even those of Phillip, the fifth, have, for the most part, been passably well conserved, or have deteriorated only by use. But those of Phillip, the fourth, and even some of those of Charles, the second, were monstrously clipped and otherwise corrupted in the disastrous times when this kingdom was filled with wicked subjects.²⁻¹⁶ As a result, many coins scarcely contain half the old value shown on their face. There are also some which are not less memorable examples of crimes and disorders,²⁻¹⁷ referred to as *del Popolo*, which were coined by order of the duke di Guise in the uprising of 1647. These are the *grana* and the *publiche*, which were imprinted on one side with the arms of the Lady of Liberty of Naples, and on the other with the symbol of Plenty. One is not less strange than the other. The latter constitute half as many as the former and clearly show that in exchanging abundance for liberty, the public was treated to as much fraud and violence as possible.

Why copper coins circulated despite

To many, the wonder is how money which was so unequal corrupted, and clipped, was able to circulate and was accepted with indifference. This is not without rea-

the fact they were very corrupted and clipped.

son, and it deserves to be disposed of with an explanation as to why it was possible. Base metal is not subject to very great errors of stamping at the mint. Moreover, a country which has base copper coins, however this may come about, finds it necessary to use them; they cannot be hidden away, melted down, or sent abroad in their entirety, as gold or silver may be. For since they are more necessary to trade, as payment for small purchases -- which are the sustaining force of any great manufactory -- no man would ever destroy copper coins in order to make a small profit on them, and allow all industry and the rapid pace of employment⁴⁻⁸ to vanish. We will see that the administration of this money provides a livelihood to men of one calling, known as *cagna cavalli*.⁴⁻⁹ In addition, copper does not go from state to state, for it is less likely to flee the heavier and lower it is in value. Finally, its velocity of circulation,⁴⁻¹⁰ which is at least four times greater than that of silver, and six times greater than that of gold, makes it acceptable to anyone, because one is always sure of being able to trade it off. It is no less evident, a fact history confirms, that something which all consider so bad can circulate quite as much as if it were thought of as good -- as long as the common deception endures and as long as everyone can live in hope that his neighbor will not refuse it.⁴⁻¹¹ This circulation endures until some new incident occurs, which reveals the look in the eyes of each one to all others, so that no one is deceived any longer. This, in turn, arouses in people a greater fear that they can no longer hope to hand on²⁻¹⁸ to others, the bad money they are accepting. Not too many years ago some good examples of this were: our state notes,⁴⁻¹² the notes of the Royal Bank of France, and English shares. In view of this, it is not strange that copper coins circulate among us.

As to whether or not it is convenient to mint new coins, as well as how and what quantity should be minted, I believe it would be beneficial to mint them, and to assign to them a price that is not much greater than their intrinsic value. Only a small number of these coins should be minted at any one time.¹⁻¹³

What it is appropriate to do to our copper money in order to put it into good condition.

It would be wrong to say that it is bold of me to treat this material, which is manifestly not a part of my profession, because it would be of no use to the state for me to occupy a place with words which others even less expert than I could fill better with deeds. But note that the errors I might make in writing could be corrected without any harm to anyone, while any errors related to actual deeds could not be corrected with-

out bringing ruin upon the state. Hence, I will turn to a demonstration of the suggestions I have proffered.

First, everyone who knows that there is no certainty in mortal things but their renewal, will readily understand that coins lost daily by accident, or destroyed by use, must necessarily be replaced in order not to leave us without any coins at all. It is no less clear that one does not have to wait for a precise need to present itself before it is attended to, or to ignore a harm which could be corrected until it actually occurs. There is a great difference between sustaining an annual expense of 10 thousand ducats in one case, for example, and having to spend half a million in a single year, in another.

As for the second part, it seems to me that I already hear many wail at me for having counselled the prince badly; these are drunk with a certain faith and justice. They protest that I wish him to bestow on copper money an extrinsic value different from its intrinsic value, and that any gain from it is harmful to the state. But I will speak briefly of the reasons for this counsel, if I may. For I believe I admire the public faith with no less religious ardour than anyone, and feel inclined to admire it, even if only mentally.

Every class of coins is subject to two types of fears. One is that they might be melted down by private individuals, after minting, for the purpose of making utensils or to ship out of the state. An insufficient amount would remain in this case. The other fear is that coins may be minted, either by the subjects of the prince or by aliens, in addition to those minted by the prince himself. This would render the amount superfluous.

How few heed one or the other of these warnings is obvious. The first occurs when the prince mints coins which are too good, that is: (1) when the coins have less extrinsic value than they have intrinsically; and (2) when the coins have greater intrinsic value than the coins of neighboring states, or those of antiquity, so that they would constitute stronger money. As everyone can see, if a prince should coin new ducats today with a pure silver content of eleven *carlini*, the new coins would hardly leave the mint before they would all go into hiding. Everyone would make payments in *carlini* and would melt down ducats or would sell them to jewelers and merchants who have concessions at foreign mints. Speaking more generally, the invariable rule is that weak money drives out strong money of the same metal, provided there is an equilibrium of forces between the

Why it is helpful to give new copper coins a value slightly greater than their intrinsic value.

two.⁴⁻¹³ Because, if for example a king should withdraw all silver money in the realm and then mint new money, and if this new money should contain eleven *carlini* per ducat, the new coin would not leave the state. Nothing more would have been done, meanwhile, than to change the meaning of the word ducat, which would now mean eleven *carlini*. There would only follow an apparent decline⁴⁻¹⁴ in the price of the latter relative to old ducats. Nor could the silver money leave, there not being enough force to cause it to leave, because none of the old coins exist any longer, or not enough of them with which to make large payments. I do not refer here to the power one metal has over the other (which is determined by fashion) whenever the proportion established between two metals is not the natural one.

The intrinsic value of copper coins.

To return now to my original point, the *grana*, a coin which is in use among us, was first valued at twelve *trappesi* per *grano*, but today they are all clipped and corrupted. The *grana* which were then stamped, those of Charles, the second, and of Phillip, the fifth, of 1703, were made of ten *trappesi*, or a third of an ounce, in order to make them proportional and equivalent to the old ones, which had been reduced in weight by fraud. Now in these parts, a pound of unworked copper is worth about twenty *grana*, and about a third more when worked. That is, there should be thirty-two *grana* in one pound of copper. But the mint cuts thirty-six from the pound, so that there is a gain of four *grana* per pound, or eleven per cent. If corrosion and wear are added to this excess of extrinsic value over intrinsic value, and if this is quite large, it will be found that copper coins, considering a very large quantity of every quality, are twenty-five per cent less than the true value of those which circulate. And if the prince should coin a wholly new one according to its intrinsic value, then besides the loss to him of melting down those already cut²⁻¹⁹ -- old coins now being retired -- he would also have a new coin too unequal in goodness to the ancient coin. He would either have to remint the old ones or they would be refused. In any event, this expenditure would all be unnecessary and without any profit. Then it would be well that in adding a small amount to their extrinsic value, the prince might in some way equilibrate them to the old, of which he has so many. But I do not believe this over-plus needs to be any more than that, that is, four *grana* to the pound, which experience has already shown would not be harmful. In my opinion, it has instead

That no harm can result from this extrinsic value, which is greater than intrinsic value.

been helpful.

It would, therefore, be useless to fear that these coins would be harmed if they contained less metal than they were worth, since it can be seen that those in circulation (in which so much metal is lacking) have never suffered any difficulty, either from being melted down or from being coined. Indeed, when they were counterfeited, this was not because of any lack of goodness, but because of poor execution of laws enfeebled by every authority. Moreover, eleven per cent is insignificant for copper; it provides no power to induce anyone to make such a profit, because of the fear of atrocious penalties. Foreigners are not in a position to do so because of the small gain. It is difficult to introduce copper money into a kingdom which is already provided with it, because large sums of it would be refused. As for small sums, men do not have the endurance to wait for such a small emolument.

For one thing, copper money, even more than common bees, is better weak than strong, because when it is too good it is driven out by silver, and this is a great evil. When it is too poor, it remains, but it is not strong enough to drive silver out because it is not capable of competing against it. But even if it should drive it abroad, this would only be a minor evil. Trade has more need of copper than of any other money, followed by gold, with silver last. This has led me to believe that we, who have very weak copper coins, have not made them any stronger by recoining them.

Why only a small amount of it should be coined at one time.

I turn now to a discussion of the reason for coining only a small quantity each year. When a state is plagued by clippers, who diminish the money with impunity, it is necessary to eradicate and destroy them, before collecting any old coins and suppressing their circulation by issuing new coins. Because if only a little is issued at one time, it is clipped as it is issued, and the harm is not abated any more than the waters of a river affect the sea. But when, because of the vigilance of the government, the state has eliminated the source of the problem, then only the effects remain, and this is precisely our case. To remake all the money that is damaged is to no avail,²⁻²⁰ because of the great expense this would involve. Nor does it help to retire such money little by little, withdrawing bad coins and substituting new coins for them. Thus, to remit a great deal at one time, say half the amount in circulation, is poor counsel, because, as the multitudes become aware of the disparity between the old and the new -- as they awaken, that is -- one will be scorned, while

the other is avidly desired. The state will end by being deprived of half that class of money which will either remain hidden or go astray.

This is much more noticeable in the case of the precious metals. Copper, which people regard with contempt, has not had the same experience. Now, if my original caution were heeded, namely, not to make the money better by twenty-five per cent but only by ten per cent, then there is every likelihood that it would not be noticed. It is also never a good rule to run this danger, concerning which -- as there is no other remedy but the quick coinage of the remaining coins -- I do not know whether such a great expense (which falls unexpectedly upon the state) would actually be so harmless. Indeed, with new means and expedients available the wound which poor counsel alone had inflicted might well become gangrenous. In other words, when one wishes to remit a class of clipped coins with the government's order as guarantee, it would either be appropriate to mint them all together or to mint them a little at a time. The latter seems to me to be the better counsel. New ones are issued in very small amounts, and like a flash of joy do not produce anything but beauty and goodness. But because this is accomplished a little at a time, old coins are not allowed to be abused, however abhorred they might be. Meanwhile, as the public grows accustomed to them, it will begin to use the new ones.

The present state of our silver coins.

It is now time for me to discuss silver, which I consider to be in an excellent and most ordered state among us. Today, government is prudent and understands this truth; it has minted new coins which emulate the old. That is, twelve ounces contain eleven ounces of pure metal,¹⁻¹⁴ the rest is used to cover the cost of the alloy, the cost of minting, and the mint fee. They are valued to conform to the augmentation of the coins of Carpio²⁻²¹ by thirty-two per cent. I pray the Supreme Author of all, and to the patron saints of his kingdom who have brought us to such a happy time and placed us under such just princes. They have protected not only their precious lives for us, but also the very maxims of wise and generous government, which is still due as much to the mercy of the prince as to the virtue of his ministers.

The incorrectness of common opinion.

Many consider it appropriate to raise the value of silver, or to change the proportion between silver and other metals. I do not agree. It would be wiser to change the values of copper and gold. This takes a thing and its equal though not its effects as proportionate. With copper changed, trade suffers little be-

cause of the change in prices; but a change in gold, a stranger among us, causes no fear among the subjects of the prince. I say again that this change is not necessary, nor would it be useful for anything. Others believe the defects are in silver money, in view of the disappearance of the *ducatoni* and the half *ducatoni* of the marquis of Carpio²⁻²² of immortal and glorious memory. But those who do not notice that this cannot result from a better quality of their silver, because the thirteen *grana* and the twenty-six *grana*, which are subdivisions of them, are many. And these are not the only ones which are of the same quality, they also have a smaller extrinsic value. For, in order to avoid fractions, they were raised by only thirty instead of thirty-two per cent. The cause of this change is that, since it is the oldest, time and many events have consumed it. Secondly, large coins are consumed less than small ones, so that there is less loss from melting them down. One must not grieve over this disappearance any more than over the misuse²⁻²³ of the money of the Aragonese and Angevin kings.

The state of gold money.

Gold had all been foreign among us, but in this year a little was minted in three different sizes:¹⁻¹⁵ of two, four, and six of our ducats, called, respectively, *zecchini*, *doppie*, and *once* of Naples. I shall discuss foreign coins which circulate in our kingdom elsewhere. Here, I shall only say that gold is a metal so precious and necessary, and errors in it so grave, that all would agree to treat it as they do merchandise and gems, even if it were coined in our own mint. Experience has taught sovereigns that it is better to allow it to circulate by weight than by the authority of the coins, and this is why everyone used to weigh it, and use the imprint only to assure the price by weight. In other words, it is already treated like merchandise in certain places. I hope and pray heaven that I shall also make this other truth known to those who rule. That is, inasmuch as the weight is left free for all to see, the value should also be left free. The imprint should be used only to attest to the goodness of the alloy. In doing this, money will have the most perfect regulation; and not so much skill and study will be required to attend to difficulties with which, in this case, it could not possibly be afflicted. I know very well that the government is not quick to see the truth, and slower still to introduce those improvements, which have already been understood for many years. Thus, it would appear that improvements are more to be desired than hoped for. But I have faith in the prince who governs us and I do not despair.

How gold shall be treated.

Why improvements are so slow to come in matters concerning the state.

Matters of state-craft⁴⁻¹⁵ are not like other sciences, which always improve from day to day; they do not display a continuous progression. When the Divinity endows men with the best of His gifts, giving them a prince of extraordinary wisdom and strength, a state is ruled well. With his death, many centuries elapse before a worthy successor appears, and matters do not improve. Indeed, it is barely possible to control the deterioration, to keep from proceeding too rapidly, and to prevent a precipitous ruin. Neither is anything to be hoped for from inferior, albeit, virtuous ministers. They are too distracted by fear and by the desire for their own self aggrandizement. Great enterprises rarely succeed unless they are directed by one who is above envy and malice. Whenever they fail, they are fatal to the honored minister who promoted and directed them.

CHAPTER 4

*THE JUST ESTIMATION OF THE PRECIOUS METALS AND OF MONEY.
HOW MUCH MORE HARMFUL A HIGHER VALUE IS THAN A LOWER ONE.
MAN IS THE TRUE WEALTH.*

The number of people who set the value of the precious metals at more than the just value is greater than the number who set it at less.

According to a popular proverb, the just is always found midway between too much and too little. Consequently, money has at all times had its unjust despisers and its mean idolators. But these two classes of men are not equally numerous. One is composed of too small a number of wise men, plus others who are concealed by no more than an imposing vestiment. The others comprehend virtually the entire remainder of the human species and, often, even those who reveal themselves to be manifest despisers. But the consequences of these unjust opinions are not to be equally feared. For the first cannot produce any harm to the multitudes, since it is unable to communicate with them, while the other is the cause of serious harm and errors which bring with them the ruin of states. It is only with these events, unfortunately, that they can be perceived. I propose, therefore, to begin to discuss the utility and necessity of money and to fix the just limits of its value, in order that -- while men draw themselves away from those common errors, on the basis of which they exchange images for things, or instruments for work -- they will know that the metal in coins is an article of fashion and not one of necessity.^{4-1,2-1} Money is not wealth, but its reflection and a deceptive instrument of wealth.⁴⁻² It follows from this that although it sometimes occurs that real wealth increases, infinitely more often it only seems as though this occurs, though it actually does not. This is like the optical illusion created by a glowing piece of live coal which is twirled rapidly, overhead, in a circle -- the illusion of a man holding a wheel

of fire in his hand. The quick change seems to create a duplication of reality.

The false praise of gold and silver.

People sometimes refer to money as the *sinews of war, the foundation of all power, even as man's second blood supply, or the principal sustaining force of life and happiness.* This could be excused on the grounds of ignorance, and because of the connection between the ideas of things and their images. But it is intolerable that one who governs should allow himself to fall into this error because of the harm he can cause others by it. For example, the riches of Sardanapalus, or Croesus, of Darius, and of Persæus were accumulated by just such a deception. Unfortunately for them, they failed to remember that wars are fought with men and iron, and not with gold. Consequently, they made the mistake of allowing themselves to be content with having gold, and were covetously plundered of the very thing which they had accumulated for the purposes of defense in the first place.

The definition of wealth.

To expose the magnitude of this common misconception, it will suffice to define wealth. It will then be possible to understand whether one who possesses money can properly regard himself as being wealthy. Wealth is *the possession of anything which is more desired by others than it is by its possessor.* This is because there are many things which might be very useful, but -- because people have had the misfortune of not knowing of them -- would not render such people poor for not having them; nor could anyone who possessed them be called wealthy, compared to others. But, on the other hand, many things are either useless or even harmful, but -- because they are erroneously much sought after -- render those who have them wealthy.

Wealth is always relative with respect to people and things.

By this definition it is understood that wealth is a ratio between two persons; and compared to any other man, each man is unequally wealthy. Moreover, not only the quantity of things desired but their different qualities, compared as a ratio, are a measure of wealth. One who owns more useful is richer than one who has less useful things.⁴⁻³ Uppermost in the class of useful things are the elements. Man belongs to this group and he is the most useful of all things to other men. Next are commodities needed for life, including first clothes, then shelter, and finally -- of less importance -- commodities which are the payment for man's pleasure. This class includes the metals and, close to them, gems which are, therefore, also useful, though less than man. Thus if Ciro, Roma, or Alexander, had more or better men, than Croesus, Persæus, and Darius, then they would have

been richer by far. In other words, victory could not rest on good fortune or be unusual, as long as the stronger remained superior. It would be incorrect to call the one who has more money the stronger. The Romans, then, did not have constant good fortune but constant superiority of power. Chance and luck are words born out of our ignorance; they do not exist in nature. We speak of miserable chance, meaning the rule of law which we do not know how to overcome. This is a term which is relevant to our different purposes; whence the wise are always called fortunate by the foolish. Nor do I believe there is a more shameful word for us than this, or one more injurious to Providence, which governs us.

The false conclusions that the metals are entirely useless.

However, it is not true that gold and silver are not completely useless, but neither are they worthy of being declared sovereign over all and regarded as the arbiters of happiness. Though not useless, they are never, like oil and wine, described in this manner. The metals are wares of fashion, and fashion is born in that prosperous state in which the first needs are easily satisfied. When disasters reappear, fashion perishes. But, if wealth is never valuable, except as a refuge from misfortunes, would something be called wealth only when accompanied by happiness? Would it be called useless when unhappiness occurs with it? What foundation could be built on it?

The false hope of having a great deal of gold and silver cached.

This is true for many nations. The Portuguese enjoy having the sacristies of their churches made into virtual silver warehouses; they see a remedy for every need in this silver. But should they have any need (which I pray heaven may never be) they would become aware what this metal is actually worth. They believe they can convert it into money and I do not know whether they will have time to do so. Should they be in need, I wonder whether they would be able to convert money into men and bread as readily as they have converted plate into money. If they could not, they would have no remedy for the calamity. Private individuals may well depend on money in such cases, because their misfortunes are not joined to those of all others. But states cannot. Minor difficulties are corrected by money, but the great ones of a state are augmented by it, because money makes it possible for the state to be plundered, not only by its enemies, but by its friends as well. In the battle of Ghiera d'Adda, the Venetians still had their treasury filled with treasures but lost their whole state without being defended by them. The harm which a well paid army had produced

In the whole sequence of history, wealth has always caused those who have fought against poorer nations to lose.

was shielded by the courage of the gentlemen who defended Padua and, therefore, cost the republic nothing.

I would hesitate to bore my readers with so evident a fact, if I did not see an indefinitely large number of errors committed by those who have held the opposite opinion, and if I had not heard an infinite number of people refer to money as the nerve of war. It is certainly a marvelous and incredible thing that in 2000 years of recorded history one never reads of a single instance of a rich nation destroying a poor one. But there are many examples of poor nations plundering rich ones. And this judgment of the human animal has not yet been eradicated.²⁻² The wealth of Babylon was plundered by the poverty of Media and by uncultivated Persia. In enriching themselves with such great spoils, the latter had lost every bit of strength and virtue; whence the Thracians and Greeks, the poorest sorts of people, exhausted the arms of Darius and Xerxes. Nor would their successors ever have had an advantage over Greece, if they had not filled the cities of Asia Minor with gold and tyranny, corrupted Sparta, and almost purchased Athens. It was then that Thebes and the Achaean League began to be worth, along with their soldiers as well as their virtue, more than money and the Athenian arts of peace. Not many years later, destitute Macedonia was moved to undo the ancient Persian Empire, bringing forth iron to oppose gold, to demonstrate which of the two metals had the greater strength. For iron found gold as far away as India, and gold did not even blunt it -- on the contrary, iron sharpened it. But soon as Alexander perished, riches caused that effect which they truly produce. That is, they took the whip to the nerves of war. This is how Rome, living always in poverty, was able to vanquish not only wealthy Sicily but also most opulent Carthage, to swallow up its entire empire which had been partitioned by the successors of Alexander. Barely ingesting it, Rome soon weakened itself and wealth ended by being the end of her greatness. Those northern regions, which because of the inhumanity of nations had been unable to absorb the treasures of Asia, remained to cultivate those seeds of military virtue which had to undo that enormous empire.

The same thing has occurred in centuries nearer to ours.

Nor have the centuries closer to our own been less productive of similar examples. The Tartars conquered China, India, Persia, and powerful Saracena. The Swiss are the poorest people but the most valorous. The Spanish deservedly had a great, valorous name until they discovered America, which was thought to be the new sinews of war. They could not understand why their

armies, which incidentally lacked every necessity but money, were so weak in all cases. They were not aware that when the fear of defeat is near, money does not find men to save, nor bread with which to live. Those, on the contrary, who know how to make use of iron, never suffer a gold famine. It is unnecessary to cite other examples, like the Provinces against Spain; Sweden under the two Gustavs; the Swiss against the Italian League; and Duke Charles; and, not too long ago, the Hungarians;²⁻³ the Irish; and, in our day, the Corsicans -- have revealed how much valor was conserved despite poverty.

The reason for this.

Experience is not contrary to reason. The rich are always less exposed to peril than the poor. For them, life is sweeter the more dear it is. Nor, are good soldiers ever found among mercantile people. This is why Carthage, Venice, and Holland have found it convenient to maintain foreign mercenary armies. These have believed they could find others, who would expose themselves to the risk of losing their lives, simply by relinquishing a small part of their riches and, thus, protect themselves from loss of the remainder. But they have become painfully aware that in such matters their friends were not less envious of, and opposed to, their family treasures, than their enemies.²⁻⁴ But this is just one reason. Another, not less powerful, is that more wars are lost by countries with more money, and excessive love of it, than countries with less. Wealth impoverishes the spirit of those who have it because it brings avarice with it; and wars require anything but excessive parsimony. Athens lost every war with Phillip of Macedonia⁴⁻⁴ because the arts of peace quietly introduced a precursor of slavery, and an inopportune increase in spending, for fighting. The miserable soul of Perseus caused it to be conquered by the Romans. Controlled by the two DiWitt brothers, Holland ran extreme dangers in the days of our fathers⁴⁻⁵ because, both by land and by sea, it was badly provided with everything that would be suitable for war, for it was following a policy of parsimony. But if anyone should have difficulty understanding the great republics that have been powerful and proud maritime nations, he should remember that naval fleets must vie with the elements more than with their enemies. This skill of navigation, which is acquired by craftsmen in time of peace, can be gained only by an eagerness for wealth and commerce. Only the necessity for combat can generate the daring which converts avarice into valor.

Money is not

From what has been said thus far, it may be concluded

the true wealth of a country. The true wealth is man.

The excellence and utility of man, to man.

that money is as useful as blood in the body of the state, and must be kept within limits proportional to the veins through which it runs. For it either to exceed or fall below these limits at any time, would be fatal to the body which it has heretofore supported. As a result, it is not worthy of being accumulated and hoarded indefinitely by the prince. The only object for his virtuous avidity -- because this alone is true wealth -- is MAN, ⁴⁻⁶ a creature much more worthy of being loved and held dear by his brothers than he is. Only when man is found in large numbers does a state prosper. How wonderful it would be to have the eloquence needed to communicate, to everyone, the passion which I have for humanity. It would be worthy of our country that men should begin to love each other. What could be more monstrous than to find creatures like us despised, enslaved, and treated like beasts. Such a custom -- born of centuries of barbarism, nurtured by a loathsome pride and by the useless esteem in which certain extrinsic qualities such as color of skin, features, clothing, and others are held -- still lives in our day. It should be noted by whomever is worthy of being born into humanity that: the greatest gift conferred upon us by the Deity in this life has been the company of our equals, that is, of *society*; that Adam was the greatest of emperors, because he possessed the entire earth peacefully, although he was also the unhappiest, because he worked it with his very own hands; that a kingdom is worth as much as the number of men it has, and no more; that it is stronger, the more people it has, over some smaller quantity of land; that there is no more foolish policy than the depopulation of a kingdom simply for the purpose of conquering another, just as it would be foolish to denude a forest, only to transplant in it plants which, now that the soil is barren, are certain not to thrive; that there is no worse remedy for the conservation of a state than the destruction of its inhabitants, which is no worse than it would be for a prince foolishly to wish to save on the care and feeding of the horses in his cavalry by having them slaughtered and skinned, and by then filling their hides with straw, so that he would be able to care for them more inexpensively now that they are not unlike the buildings of a city, devoid of any life;² and, finally, that men should know that even in our day, as experience tells us, the Divinity is jealous of injuries that men inflict upon other men, and that one can still see the wounds of many nations which depopulated their land, without any true need -- even though this occurred many centuries ago.¹⁻¹⁶

Eulogy for the Chinese form of government.

In a word, nothing is worth more than man! It should be known that he is so valuable an entity that it would be wise to begin to treat him like a thing of great value -- in the hope that, perhaps, avarice will accomplish what could not be accomplished by virtue. The Chinese, whose science of government is highly esteemed by many (for many reasons, though it is despised by others) have a great and glorious proof in their favor, in that their nation is so populated, and ruled by a government so constituted that it confers great benefit upon the population.

How much and by what means the population may be increased.

This part of the science of government is well known and not in all respects unrelated to the present work. It would, therefore, seem to be well for me to discuss this here, briefly, despite the fact that it will be stated more fully in another work. I will comment on the means of increasing the population of a state.

These are six in number: I. the state should have exact justice and liberty, that is to say, good laws. By liberty, I understand here not the participation of the individual in government, but the peaceful exercise of as much of right reason and true religion -- which is the same²⁻⁶ -- as is not opposed, nor harmful to the good of the entire state. Justice and liberty make up for any lack of beauty, climate, or land. The mountainous countryside of Switzerland and the marshy delta of Rovigo have decreased the population of fertile Lombardy with these arts. II. It should honor military virtue, which defends it against enslavement and makes necessary provisions against pestilence. The first of these always grows out of good laws and, in general, there is no valor where there is no liberty. III. The just distribution of taxes. This keeps men from being reduced to poverty at the same time that it inflicts no harm upon industry or commerce. For poverty would decrease the number of matrimonies and offspring, and is sometimes more damaging than the plague itself. IV. Equality of wealth. Because fashion, companion to the unequal distribution of testamentaries, causes the emigration of families and is, for this reason, regarded as similar to strict celibacy by all. V. The prince himself, without whom all the things enumerated above could not be enjoyed permanently. VI. To favor agriculture over everything else, and more than trade. Man is an animal who nurtures himself from the soil. Commerce produces no new fruits beyond those of the earth; it only gathers, transports, distributes, and exposes them to sale. Consequently, if these are lacking, all trade is extinguished. Agriculture, then, is the mother of trade, without which one could live, even if with

The superiority of agriculture over commerce.

some difficulty. But without agriculture one could not live at all. It is, thus, generally wrong, as it is disastrous, for agriculture to be scorned by many who can be heard saying, more and more, "*commerce, commerce,*" always, mechanically but with more and more praise, without understanding it, simply because it has become fashionable. But whoever prefers it, however wrongly he might do so, is taken to be a man that is knowledgeable in matters of statecraft, as long as he does so with a grand air, and surrounds it with mystery. This is a class of men which becomes more and more pernicious to our state as references to it in social and family conversations are multiplied, to our detriment.⁴⁻⁷

This will suffice for now. For I have treated this more fully in another work,⁴⁻⁸ one which comprehends all the arts of government, and which I have no doubt of publishing, given the fact that the evils, of the sort which oppress and virtually crush me, are not expected to change.

CHAPTER 5

COINAGE.

Etymology of coinage and its nature.

> The word coinage is taken from the Greek, in which *εἰκῶν* denotes an image. With some corruption, this can be made *iconiare*, and denotes the stamping of an image on something. A particular application of this involves stamping such images on coins, which serve to endow them with some authority. Many erudite persons have differed on how ancient this practice is, but it is clear that nearly all people have used it to the same end. All have marked coins with either the image of their own deity or a bust of their prince, or they have marked them with the emblems -- I would almost say with impressions -- of their cities. But these researchers and studies are far more appropriate because they are scholarly than for their use in the science of government. It will be more convenient for me to turn to some other part of this discussion. As for coinage, permit me to point out that this is not really the same thing for metals as signatures are for notes⁴⁻¹ or receipts.⁴⁻² The latter constitutes all the value a note has; and the paper on which it is made is equally able to secure for one a greater as a smaller amount of another's pleasures. Thus, notes have only an extrinsic value; one cannot say they have any intrinsic value beyond the half penny the paper of which they are made is worth. This is not true of coins. Coinage manifests value which coins actually have intrinsically; the value is not created. When a coin shows some other value, this does not destroy the other; both exist simultaneously. Both the value of the coinage, and the legal value, both of which are called *extrinsic*, are valid for as far as the law extends and is powerful enough to be operative. The other, which is inherent in its nature and is embodied²⁻¹ in the metal, is therefore called *intrinsic* and endures and prevails

where the first cannot. Coinage, therefore, is a representation of intrinsic value, made by the public authority, legally and justly adopted. The coined metal cannot be given any value the prince desires; rather he is persuaded, generally speaking, to make it uniform with its intrinsic worth. Since a good deal has been said about the latter -- the intrinsic value of the metal, which has been shown to be independent of its use as money²⁻² -- it is not necessary that I return to that subject here.

How important the expense of coinage is.

It only remains for me to inquire whether or not the value of coined money must be the same as the value of the metal.²⁻³ First, note that today, it is greater in all principalities -- the coin is worth more than the metal, or plate it contains, by the whole expense of coinage, plus a little more, and the prince retains the difference as a right yielded to the mint, which the French call *droit de seigneurage*⁴⁻³ which only comes to two and one-half per cent. The expense of coinage differs according to the wages of the workers of the different countries, but is valued at wholesale at one-half the intrinsic value of copper, one-fiftieth for silver, or one-four-hundredth for gold.

Though it is not known for certain, I believe that in ancient times the expense of coinage was not included in the value of the coin, because the ancients first used their coined money to represent their gods, inasmuch as they were esteemed highly as famous and glorious. This desire to immortalize the glory which was the final goal of those nations,²⁻⁴ as it is among us (thanks to God for truth) the second life was such that in coins, every care was taken to depict with the noblest sculpture those events and men which were believed to be worthy of immortality.²⁻⁵

The opinion of Davanzati on coinage.

With this granted, we inquire next whether it is more useful for the mint to be paid out of the value of the coin, by whomever receives the money, or whether the mint should be paid by the public, out of some excise which the prince uses to maintain the mint.

Bernardo Davanzati concludes, in his not so wise discourse on coins, with these sentiments^{1:2-6}

And in order to remove any temptation for gain, and to cleanse away all signs of it and make it all golden, clear, and certain, the money should circulate at the value of

¹In Prose: Florentine, Book IV.

its metallic content; that is, it should be exchanged for the gold and silver embodied in it. The raw metal should be worth as much as metal bars, or coins, with a given alloy content, because the metal can be converted into coins, or the coins into metal, like an amphibious animal. The mint would want to make a total amount of coin equal in value to the metal which it receives to monetize. But would the mint wish to include its expense in the coin? Surely! Because many hold that as a civil responsibility, such an expense belongs to all in common, in order to maintain the life blood of the republic, just as the salaries of soldiers belong to them, and those of magistrates, to sustain liberty and justice. To others it seems proper that the coin should pay its own seigniorage, made less by so much, because it is worth that much more than its raw material as plate or utensils, or any other material that has been worked. Finally, the old custom of taking out of the coin the expense which people see, is fixed and the prince is in possession of it. I do not wish to differ with the masters. But I say emphatically that if the mint is not to bear this expense, then the expense should at least be minimized and the coins sooner made less beautiful, as some prefer. But why not, instead, return to the old method of casting them? This would have every advantage. Two stampings by steel would stamp it properly and a coin could be made in two molds, probably of copper, by two men, without additional expense, and without loss of metal due to cleansing or for coal. This would make the total output for a day equal in weight and body, and make it more possible to discover either clipping or counterfeiting. Coins could not then be made of the wrong metal, say a lighter one, to deceive the balance -- because it contains some common metal -- or the eyes because it is more or less heavy and large. And they would be made

most correctly as long as the officials remain to see them melted down, lightened, and stamped behind the great barred windows of the mint, which were built by those good and wise ancient citizens. In this manner, who would not see that the expense would thus be reduced, together with fraud and profit, all bad roots which always return after they have been eliminated and which make coins worse? Almost as a corollary, I should add finally that men of commerce have so many difficulties and troubles because of these cursed coins that it would, perhaps, be better to make them without gold or silver, by weight and tare, as in earliest times, and as the Chinese still make them today. They bring them into the grip of their scissors with implements to sample them, and do not have to struggle with alloying, though they would understand this, too, with some experience and examples.

Whatever skills he might have had, he certainly could not have held more wrong ideas in so few lines, or revealed himself to be less intelligent about his material than he did. But he does deserve praise for dealing with such a difficult subject as he has discussed here.

*Examination
of these
views.*

For this is false! Indeed, it would be tragic if the mintage fee were not withheld by the prince. Only a man who does not understand would prefer the old imperfect and inconvenient method of coining, that of pressing out coins by hammer blows, to the marvelous and beautiful invention of the press. Only the mind of a wretched miser would think of saving a few hundred *scudi* when it would result in ugly and awkward coins, public works consecrated to immortality. Only a fastidious and troublesome old man would want to abandon coins and praise the Chinese for what are nothing but words in their literature and language which only deserve to be rejected and regarded as contemptuous.

To begin with, why should Davanzati's proposals be adopted? It would not help to prevent others from minting the same coins because anyone who made such coins would have to withhold the cost of producing them. Their value could never be less for any private individual than the value set at the prince's mint. But if there should be loss in the case he proposes, there is no gain

in the present state either. To prevent a man from committing a crime, in view of the attending punishments and anxieties, it is not necessary that he lose on it, it is only necessary that he not gain a great deal. As for that which Davanzati believes and proposes, it would not only not be profitable, it would actually be harmful. In such a case, goldsmiths would melt down coins to meet all their needs, because coin is much easier to acquire than new metal. Consequently, they would practically drain the state of specie and this would make it necessary to coin money *ad infinitum*. For example, it may suffice these days to coin 50 thousand *scudi* of silver and gold annually, in order to continuously replace the imperceptible dissipation which is taking place; but in those days we would have had to mint four times as many.²⁻⁷ By its nature, the mint is a public burden, as are other public expenditures, and it should always somehow be supported by the public. No differences should ever be placed between a just prince and his people, not even verbal ones. Davanzati proposes to quadruple the public's burden. He is too jealous when he suggests a policy which, however heroic it might seem to him, fails to recognize the pernicious consequences it may have for the people.

*Defects in
English coins
which were
discovered
by Locke.*

The case I have been discussing lacks no examples of nations which have understood it by experience. In 1698, England did not value her coins at more than the stock of which they were made. Her mint was supported by an excise tax on wine. It is incredible how much money was continuously coined and how much was very soon melted down, as the operators of foreign mints joined the trade in English coins, just as they had entered the market for Spanish gold plate²⁻⁸ which they now use to virtually drain all coins out of England. How much gain this brought to mint officials, how much it cost the public, was understood by John Locke, and later, by Parliament itself. Locke also understood that a rise in the price of coins was an inappropriate remedy for this problem which originated from some deficiency at the mint. In other words, Davanzati's counsel is only good and profitable for mint officials; to all others, it is not more than useless; it is in fact damaging.

In addition, if coinage is a convenience added to money, it is not an injustice to want to make up the damage it does to those who drink wine and those who cultivate the vines from which wine is made, while the gain from it goes to the men of wealth? Taxes are an

inconvenient producer of greater conveniences. Consequently, it is always desirable and just, that those who gain any advantage from them should be the ones who suffer the burden in proportion. This is precisely the situation when money includes the price of the labor which produces it.¹⁻¹⁷

The other advice of Davanzati, concerning the instrument used for coinage, is no less faulty. On this point, I suggest that my readers see Chapter 18 of *Saggio sul commercio*, which contains an account of what Errico Poulain, president of the Royal Monetary Court⁴⁻⁷⁴ did in 1617, in order to prevent the introduction of the press which is used today. This had been proposed by Nicolas Briot, its inventor, who later brought it to England to be put into use there. In this chapter, which is surely the most beautiful in all that short judicious work, such men as Poulain are portrayed with such live graceful strokes that it deserves to be committed to memory and compared by each reader to his own life.

The advantages of the press are enumerated by John Locke and they are eminently true. These are: I. that the weight of the coins are most nearly equal, because they are not made individually but in plates, and are then cut into many circular pieces which, before being coined, are weighed and made equal; II. that we are liberated from the fear of counterfeiting. In the old method, one man alone directed the entire operation, and the coins, or punches, were struck by him alone. Thus, it was not difficult for others in his household to imitate his coinage secretly.²⁻⁹ Today it would be necessary to have the whole heavy press in his home, and even at that, differences in imprint imposed would reveal the fraud. Even the edges could be milled as in our most recent gold coins, which eliminates the fear of their being sweated. III. that the time and expense of workmen are small and the beauty of coins incomparably greater.

But enough of coinage. It is now time to discuss the alloy which is added to the metal, to which we now turn, in the chapter immediately following.

CHAPTER 6

ALLOYS.

In their natural state in the veins of the mines where they are generated, the precious metals are not only thoroughly intermixed with hard rocks which have been reduced to a powdered form, but also contain more or less base metals in their very substance. The latter is called an alloy. The precious metals are not even purged of these impurities when they are found flowing in rivers; this can only be accomplished with fire and with the application of appropriate skills. Most often, however, gold is mixed with silver, though mercury and copper have also been found in the mixture. Silver is joined together with lead and mercury. The purity of the metal is not a natural purity but one that is achieved with great skill.²⁻¹ Goldsmiths, as a group, regard it as broken down into certain parts or grades, accorded to the proportion of impurities found in the metal. For example, gold is divided into twenty-four equal parts, called carats;²⁻² silver into twelve parts, called ounces, which are in turn, subdivided into sterling. This alloy, which gold and silver naturally contain has given rise to the alloy which is added to money when it is coined. It consists of some base metal added to a more precious metal in some fixed proportion, though not always in equal parts. Consequently, the value of the alloy does not have to be considered. Of course, whenever one-half the coin consists of one metal and the rest of another, as in the case of the French sous,⁴⁻¹ or the base money of Venice, or Turkey, then copper is not referred to as an alloy; the coin is said to be bi-metallic.

The need for this usage was born of two primary causes. One is that cleansing the metal of every impurity requires a very special process which is most

laborious and time consuming. Consequently, it was resolved to use the metals with the alloys they contained in their natural state. But this was soon found to vary from grade to grade. Although the purest gold money is barely of twenty-three carats, some was known to be of sixteen carats, and some even of twelve. (The latter was called *electrum* by the ancients, and is, perhaps, what we have called *Tombaca*.) It was, therefore, necessary to reduce the entire mass to be coined to the same grade by cleansing it of any other impurity, or by adding some alloy to even the purest metal, in a proportion depending on its grade. This practice is followed today. In this manner the *louis d'or*,⁴⁻² of France is fixed at a goodness of twenty-two carats; the *doppie* of Spain at twenty-one and a quarter; and the Venetian *zecchini* at twenty-three and three-fourths. The self same principle is also applied to florins and *ungari*, though not with equally tempered metal. As for silver, the practice in France is to mix eleven ounces of fine silver with one ounce of some alloy. This is our custom too.

Another reason for this custom, not less considerable than the first, has been the following. Since the purest gold by itself is too soft, some alloy is used to harden it. It does this so well that hardening has been combined with the art of tempering it. Silver, for its part, is more fragile the more pure it is and the more it is not able to resist the stress of coinage, which is indeed great. Whereas the former is subject to becoming crumbled, the latter becomes fragmented into many small pieces. Small wonder that the use of alloys is such an ancient practice.

Greek medals, like Roman, Punic, and Spanish medals are also alloyed but not in exactly the same way. Silver medals, principally those of Rome, originally contained more silver than those of the present day, and gold medals have been singularly pure since the days of Alessandro Severo. Macedonian medals had a purity of twenty-three carats and sixteen grains; while one Roman medal, the gold medal of Vespasian, had as little as one-seven-hundred-and-eighty-eighth part alloy. Silver consuls did not contain in excess of ten ounces of fine silver, though from Alessandro Severo on nothing is found but disorders, frauds, and the grossest mixtures of alloys. Those of gold were less than four-fifths pure; those of silver just one-third pure; and so on, declining as years passed, from one empire to another, until the time of the Goths. In the days that followed, deservedly described as barbarian because of the misery which

characterized them, no rule or stable measure can be found for the goodness of coins. Although Charlemagne, and later Frederick, the second, put them into a more tolerable state, they soon declined from that level. In France, they varied in virtually every year with many disorders and with an incredible inconsistency. From 1302 on, from when more accurate information has been available to us, no rule whatever can be asserted. It is astonishing and horrifying to observe changes in the florin and to observe how much its value has suffered, compared to the *scudo*,⁴⁻³ from 1345 to 1357, in the reigns of Phillip VI and John. From Easter of 1355 until the end of that year, the price of money was changed twenty-two times, going from a value of sixteen *scudi* to a value of fifty-three *scudi*, beginning on the first of January. On the fifth of January, it fell to thirteen *scudi* and four *denari*.⁴⁻⁴ Finally, France laid hands on its money more than any other nation and changed it almost with the same fickleness which her people apply to clothes. The history of Blanc, and others, provides the world with a description of a country which is singular for the periods of misery and calamity it has experienced. Those who might not have the work of this learned French author available to them, will be amply informed on this matter by the *Dictionary of du Change*,⁴⁻⁵ augmented by an article of the *Fathers of San Mauro*, under the title *Moneta*.⁴⁻⁶

*Disorders
in Italian
coins during
the barbarian
centu-
ries.*

Even disorders in the Italian coins of those days are not insignificant. Their quantity was changed by different princes, just as it was in France, where the poor government of a single ruler prevailed. It should be noted that no city in Italy, however small, failed to enjoy at least a shadow of liberty²⁻³ for some period of time; and they did not wish to coin any money at those times. In our own kingdom, the princes of Salerno,²⁻⁴ who remained sovereign after the destruction of the Longobard⁴⁻⁷ Kingdom, the people of Salerno, as well as the consuls and doges of Naples, coined their own money. Later, when the Normans⁴⁻⁸ reduced all coins of this kingdom to just one, this was the only state in all Italy to enjoy a system consisting of a single coin. This is why their coins have been the best controlled. These were issued by the Normans in Sicily and the Swabians⁴⁻⁹ in Messina and in¹ Brindisi, and were then minted in Naples, which was about

¹As narrated by Riccardo da S. Germano in his *chronical of the year 1231*.

to become the royal seat.¹⁻¹⁸ But the rest of Italy, which was divided into the smallest cities and which was sometimes under petty tyrants and sometimes under a kind of liberty, was miserably torn into factions of different leanings, until the advent of the fifteenth century. There was not a city or gentlemen which did not coin enough money and (what is worse) which did not make it different from all others in weight and fineness. In only one state, for example, (a state which now belongs to the Church) coins were issued by: the Popes, the Roman senate, Ravenna (while under the Goths, the Esarchs, and its bishops) Rimini, Bologna, Ferrara, Forli, Pesaro, Sinigaglia, Ancona, Spoloti, Ascoli, Gubbio, Camerino, Macerata, Fermo -- and so on, in all the rest of Italy. It is easy to see what caused such confusion for, in such cases, the tyranny of princes is always joined to the stupidity of their subjects. The damage which the superiors tended to do by alloying and raising the value of the coin tended to be minimized by their subjects because they did not suffer from it and were virtually unaware of it.²⁻⁵ But as the disturbances of arms -- which inevitably occur -- caused poverty and wealth to take a different turn than was expected by these changes in wealth, this caused trade to move even more slowly than war and plunder. But this is not because credit was better with some coins than with others. Nor was it any longer customary for contracts to state that a particular coin was to be used for payments, or to add that it must have such qualities as: *aurum, dominicum, probatum, orbizatum, optimum, pensantem, expendivilem*, or others. The *denari* of Pavia and Lucca, which were referred to as *Papienses* and *Lucenses*, were among the more accredited coins. We find these mentioned frequently. Until the Florentines coined their florin of one dram of pure gold, all others were rendered obscure and bested by these. Terms like *fortis* and *debitis* originated in these centuries because of the great variety of coins which existed then. They explained the greater or smaller amount of alloy contained in a coin. From these, other terms describing coins said to be *infortiata* or *infortiatorum* were born a short time later. But since the public complained bitterly of the augmentation of the currency and of alloying, princes often had to restore coins which they had corrupted in this manner, coins which in those centuries were referred to with terms such as *inforziare* instead of the Latin *restituere* and *moneta infortiatorum* or almost *Moneta Restituta*.²⁻⁶ References to such coins are found in the literature as far back as 1146.

Reflections
on moneta
infortiata.

Though it is not part of my study, it grieves me to have to pass silently over a conjecture which, because of its singularity and novelty, it would be pleasant to discuss. I believe that from the name of this money, comes that which is called *Infortiatum* in the second part of the *Digesti*. Coins referred to as *inforziata* occupied a place midway between good, old coins and new ones which have been reduced. This correspondence could be the reason that, since the name had been given to the *Digesto vecchio* as well as to the *Nuovo*, and since none was found between these, the memory of this once celebrated coin gave them such a name. For, as strange as this etymology might seem, if the other two were examined, it surely would not be regarded as unworthy of their company. One comes from the frontispiece to the title which says, *de veteri jure enucleando*; the other from the one which says *de novi operis nuntiatione*.²⁻⁷ Anything understood so poorly should not have allowed an etymology that was anymore reasonable, to the name *infortiatum*. All would have been forgiven because of the misery of the times.

It is not
alloying
that makes
coins bad.

To return now to my original subject, I think it is imperative that we eliminate those errors which lead people to think that alloying can be harmful to coins regardless of whether one refers to good coins or bad ones. All money is equally good; those which contain ten carats of alloy²⁻⁸ are as good as those which have only one. This is because money is not valued according to its total weight, but according to how much good metal it contains. In other words, a pound of twenty-four carat gold coins should be worth as much as a pound and a quarter of eighteen carat coins. Everyone can see that despite so much difference in alloy content, the coins are of equal goodness, because the alloy can always be separated from the precious metal. Why, then, many ask, are coins containing a great deal of alloy said to be bad? This is because, often fraud or the force of law cause people to accept money with a great deal of alloy, at the value it would have if its entire weight and substance were of pure metal. This is what happens when a pound of gold of twenty-four carats is made equivalent to a pound of eighteen, in which there is only three-fourths gold and one-fourth alloy. Thus, it is the law which makes money bad, not the alloy it contains. Those who would wish to see that a state has only good coins would not set a value on any, or assign prices to them. For, if they are unequal in value, assigning prices to them will only cause the multi-

tudes -- the most faithful and just measurer⁴⁻¹⁰ -- to compare one to another. If all coins are of equal base alloy, then every apparent increase of goods will cause their prices to be adjusted in proportion to the good metal the coins contain.

That what I say is indeed true is clear, among other reasons, from the use most nations make of money with a high alloy content, composed of half precious metal and half base metal, which the French call *billon* and the Spanish call *vellon*. No one would refuse to accept such money because it is valued and circulates on the basis of the good metal it contains. As I have already indicated, I will discuss this before concluding this book.

Reflections
on vellon
money and
its utility.

Many serious writers¹⁻¹⁹ and the best governed republics think well of coins of two metals, as indicated by the fact that they use them and throw the full power of their authority behind them. Indeed, they regard this as a useful and wonderful institution. Both by example of such governments and by what other governments say, they have been persuaded to use them as a solution for every difficulty, almost with the same hopes and expectations that one with a serious illness comes to expect from elixirs. The true utility of these pieces of money, as Broggia enumerates them, is:

- I. Loss is more serious when small silver coins are used a great deal and when they are made of pure silver alone, than when they contain some base alloy;
- II. Silver coins made at the mint with a lower carat rating are more likely to be used. Also, if the silver should have to be refined, it would require a greater expenditure than if it were made with a greater alloy content and of a smaller value;
- III. They would facilitate small trade.

Such varieties of utility are all proper and real, but they are insignificant as far as an entire state is concerned. As I will show in the next book, if such a saving should be accomplished in our kingdom, consumption of such coins would not amount to more than 20 thousand ducats, over a fifty year period, or to 400 ducats a year -- such a saving is so poor and wretched for a kingdom that it takes your breath away. This truth is demonstrated by calculations drawing entirely from certain and known principles, and there is a great difference between a general estimate and this one, which is careful examination of the elements of a specific case.

The other utility is even less noticeable than this one is. In the coinage of a million ducats, this scarcely amounts to 2,500 ducats, because it only falls on silver coins alloyed with the basest metal. Only the saving on refining is relevant in this case. In our own mint, expense is valued at 32 grains per pound of silver, where a pound contains almost 1,600 grains. This saving hardly comes to 4 grains to the pound. Thus, for a million ducats (which I suppose would all have to be refined) the expense would come to 20,000 ducats, a gain of 2,500.²⁻⁹ This calculation is made on the basis of all the best assumptions. I should warn the reader that in a kingdom such as ours, there must not be more than a million ducats in vellon money, the coinage of which would take at least a century. When you add to this the fact that coining vellon costs twice as much as coining silver, and that the copper used on it is entirely lost,²⁻¹⁰ all can see that this would involve some loss, or, at least, no gain at all.

Why vellon
coins called
nigellorum
have been
introduced.

If a greater facility of trade is thought well of, then this process suited past centuries better than our own. Base money was introduced because of the diminution of silver in the Roman Empire, as stated by Nicholas Orsme, the Bishop of Lexovio, when he said:²

& quoniam aliquoties in aliqua regione non fatis competenter babetur de argento, imo portiuuncula argenti, quae iuste dari debet pro libra panis, effert minus bene palpabilis propter nimiam parvitatem, ideo facta fuit mixtio de minus bona materia cum argento; & inde habuit ortum nigra moneta, quae est congrua pro minutis mercaturis.

This money is the same as *moneta nigellorum*,⁴⁻¹¹ which is frequently referred to in the literature of those centuries. In our own century, gold and silver have been so abundant that the smallest copper coins, such as the *cavalli* and *duecavalli*, have begun to be retired, so much easier is it to retire the money we are actually discussing than to desire or be encouraging about money which does not exist. The fact that we do not have a coin between the *pubblica* and the *carlino* is not known to cause us any difficulty. Should we experience any, it would be better to deal with it by the introduction of a fine silver coin somewhere between the *carlino* and the *duecarlino*, than with base

²De Mutat Monetarum, Ch. 3.

money. We do this with the twelve and thirteen grana and their doubles.²⁻¹¹ But this should not be introduced where it does not exist, in spite of its small comfort, which will be seen by this grand and powerful reason: namely, any new coin that is not really useful is bad simply because it is new.

Base money must not be regarded as good money simply because it remains in a state.

Many have persuaded themselves that base coins which have the virtue of remaining in a state and not fleeing, are a wonderful thing, and nothing else should be coined in their place. But this flight of coins (which come to us and circulate) is like the coins in the opposite case, purely imaginary. Coins do not flee, nor does their circular form and light weight cause them to roll away or to be carried off by the wind.^{4-12, 2-12} I am so certain of this that should they flee without being touched, it will be at my expense. No! It is men who carry coins off, and they do not do so except out of necessity, or for gain.

If they have left because of some necessity, then whenever people could not send money to deal with some misfortune or fill some need, they themselves would have to leave. Man is worth more with money than without it, but money without man is worth nothing at all. Hence, necessity would require that money be allowed to leave in this case, and not that it be retained. Man must hunt money, because if he does not do so, it will hunt him.

As for utility, because of which money¹⁻²⁰ might also flee a country, this principle must be firmly established; bad money drives out good.⁴⁻¹³ Money which is valued poorly in terms of the proportions of metals it contains, is bad money; it contains less metal than it should on the basis of its legal extrinsic price. Hence, it is not true that vellon which is poorly valued has the virtue of remaining in circulation. Quite to the contrary: it has the virtue of sending silver and gold away. Whether or not this is desirable is obvious. The worst thing would be for the vellon itself to begin to leave, after it has caused poverty in the state. If, on the other hand, vellon were valued well, then such coins would never leave because of any inherent intrinsic deficiency. The problem would be elsewhere; and it is there, not in the coins, that the remedy should be applied. The disproportion of value is the only defect which causes the coins to leave. But this will be demonstrated in the book which follows.

BOOK III

THE VALUE OF MONEY

INTRODUCTION

Book Three deals with questions which are so serious and important that most writers have treated them separately from other matters. Moreover, all there is to know about money could be comprehended in such works. If these writers deserve praise for this in one sense, in another sense they do not. For, on one hand, most calamitous events and popularly adopted proclamations of states can be said to have originated wholly from alterations in the value of money. On the other hand, the matters discussed in the First and Second books, and those which will be treated in the Fourth have been ignored to a degree that is inexcusable. Nevertheless, all these could be granted if at least all that pertains to value were treated with as much accuracy as is celebrated; but the treatment of money has only led to more confusion, disorder, and error. This can only be explained by the fact that whenever man reasons about matters involving interest and profit, he is overcome by excessive fear or extraordinary avarice. Worse still, because the decrees of the powers are almost always introduced, or suspended, on the counsel of private individuals or the clamour of the multitudes, it is rarely possible to keep the goals of reason and the public welfare in view. In addition, while there is small comfort in the fact that so many who are regarded as wise have been mistaken and have had to pay the penalty for their errors, it has not been possible for some time to reproach our government for any statute on monetary matters which has brought serious harm with it.

In order to bring some order and light into such darkness, it might be well to begin by discussing just what this proportion between money and coins is. Indeed, this should be prefaced by stating that the intrinsic value of money differs slightly from that of the metals, for coins must include their manufacture and, sometimes,

even the right of seigniorage. (Among us, this comes to virtually one third of the value of copper coins, a fiftieth of silver and one-four hundredth part of gold coins.) But since the latter is a fixed and invariable expense, any variation in the value of money actually depends entirely on variations in the value of the metal to which it is joined. Consequently, if we ignore the cost of making coins, the metal alone is understood when the intrinsic value of money is considered.

Book One in its entirety was devoted to the origin of this value. This explained, we may now undertake a discussion of the nature of this value.

CHAPTER 1

OF THE PROPORTION BETWEEN THE VALUES OF THE THREE METALS USED FOR MONEY.

Considering the great many errors by which our minds are surrounded, errors by which we are perpetually deceived, few would remain -- as can readily be seen -- if it were possible to remove those which originate from relative words taken in an absolute sense.²⁻¹ If this were possible, this third book could be omitted. For, everything which has been written by the learned on the subject of money, and adopted by princes, has for the most part been done without any understanding of the fact that value is a word explaining such relationships. Subsequent inquiries concerning the augmentation of the currency and, in particular, whether or not this is useful, would not have been treated in such a disorganized manner had it been kept in mind that utility is a relative matter.⁴⁻¹

Value is
relative.

Why the
value of the
metals is
taken as
fixed.

It suffices, consequently, for me to say that value is relative in order to explain the equality of the need for one thing and another, for it to be understood that the value of money is not established and fixed by laws or customs. Nor is this possible within the realm of human powers, because to fix a ratio, it is necessary to hold both ends of it fixed. Thus, to fix the price of money it would be necessary to agree to fix the prices of, for example, grain, wine, oil, and in the end, of all things. But this is not possible. How, then, one may ask, can the value of money be said to be fixed? It is incorrect to say this because, considering the infinity of goods with which money is compared, its proportion with one other thing alone is fixed: and this is money itself. I have said that coins are made of many metals. Now the law has fixed the relative price between one metal and another in order to facilitate

their measurement against each other. In addition, among coins of the same metal, prices are established according to the proportion between the quantity of metal they contain. This is more a manifestation of coinage than a law of proportionality. From this discrepancy in language, another discrepancy has arisen. To wit, when the proportion between money and, for example, grain changes, one does not say that money has become dearer or cheaper, as truth would require, but grain. Only when copper is varied relative to silver is money said to be altered.

The effect of giving the wrong proportion the force of law.

Establishment of this proportion by the authority of law, so that its alteration according to its natural movements becomes impossible is, and always has been, the source of the serious errors which arise in the intrinsic value of money. Even all others, such as counterfeiting and clipping, draw their maliciousness from the fact that they change their natural proportions, not because they change what has been ordained by the law.²⁻² And the harm which results from an unnatural proportion of value is this. Since value is a proportion between the possession of one thing and another, when it remains within its natural limits, only those people who need one of the two, not the rest of mankind, are disposed to exchange one for the other. It is, perhaps, as they are traded that one of the two comes to be worth less than its just price, and the other more. As a result, it will be advantageous, even for those who have no need for them, to give the one and take the other. And this is how a means of gaining arises, not from nature but from law; that is how trade, which everyone understands and is able to do without work or talent, originates. Thus, a thing which is valued at less than its natural value will be lacking; the other, that which is substituted for it, will be overabundant. Even the force of law cannot make it become more dear. And this is how they come to be in equilibrium⁴⁻² with each other. Now, supposing that such a thing were useful, we would be deprived of something which is useful to life. And, since happiness in this life always originates from such comforts, this is the worst of all evils.²⁻³

What has been said above is applied and explained with examples.

This effect is general in all things whose values are fixed. Applied to money, it is established that the natural proportion between gold and silver is such today that one who possesses a pound of gold is equally as well provided for as one who has about fifteen pounds of silver. If the public authority should now make thirteen pounds of silver equal to one of gold, it would

suddenly become worthwhile to make payments in silver, since not fifteen pounds but only thirteen would need to be given in order to satisfy a debt equal to one pound of gold. It would then also become advantageous to retain gold and send it abroad, where it is still customary to value it at fifteen pounds of silver. Once this change has been made, a man who formerly received thirty pounds of silver, as income, and who owed a debt of fifteen, would now receive seventeen⁴⁻³ in income and be indebted for thirteen. Consequently, gold would disappear and silver would be multiplied.²⁻⁴ Indeed, if this were to endure permanently, all gold would vanish.

If on discovering the loss of a class of such necessary money the law were abolished, then the harm produced by the effect would be felt.²⁻⁵ For, supposing that 100 thousand ounces of gold were exported and exchanged for silver, while the disproportion was in full vigor, then it would bring 1.3 million ounces of silver. If the state should now wish to recover the gold, would it earn another 100 thousand ounces of gold? It would not! For it would have to be recovered from a country in which the laws by which it was lost have not been adopted,²⁻⁶ one in which an ounce of gold is still worth fifteen ounces of silver. Only 86,666 would be returned. All the rest, not a little, has been lost to the state forever. It has gone into the hands of people who are more shrewd. If these have been foreigners, it is easily seen what an insane and considerable gift has been made to them; if they are local citizens, then only a political fool could say that no harm has been done to them. For it is a law of nature that wealth must be requited only by one who brings utility or pleasure to others. Wherever one is made to spend or lose any part of his gain, without enjoying any pleasure from it, there can be no order from government whatever, and no happiness. Excises, taxes, the wages of magistrates are only just when they are so ordered as to enhance tranquility, giving sustenance to those who are wiser and more virtuous, and who know how to maintain peace and a well regulated liberty. Tyranny is no more than poor rules by means of which riches are acquired by those who are either of no use to others or, perhaps, even harmful to them. Tyranny, then, is causing the wealth of a person with a great deal of gold coins to be transferred, without any reason, to a person who has silver coins. Whoever says that the entire state does not lose as a result of this, even when both parties are citizens, should recall that of all things which

destroy a country none does it sooner than tyranny.

Having revealed how much harm would result from assigning the metals a false proportional value, it does not seem beyond the scope of this subject, inasmuch as the discussion draws me there, to discuss the reasons why there has, nevertheless, never been a people or a kingdom which has not sought to establish such a proportion. First, I will try to determine whether it has been necessary. When I have demonstrated that it has not been necessary, I will try to determine why it has always been done.

It is useless to establish this proportion by law.

To show that it would be useless to establish such proportions for money by law, any less so than it would be to establish the prices of interest and exchange, John Locke uses the following arguments in his treatise. According to Lock, when the nature of things establishes a proportion, the law should not interfere. Because either the law does not vary from nature, in which case its intervention is useless, or it does vary, which is unjust -- and, of course, everything which is unjust is always harmful to everyone. Such an argument, conceived as it is in general terms, is not a good argument. Because, as everyone well knows, since a just law is the confirmation of nature, it follows that laws should not be made for they would inevitably be either useless or harmful.⁴⁻⁴ Such a law must be restricted to those cases in which the violation of nature cannot be feared, as in the case of the prices of contracts. Purchase and sale is in full and natural liberty, even in the civil state, as is everything else, when it depends on the consent of two persons. The law cannot determine for us what we should desire or need, nor excite our appetites for acquisition or indifference as to possession of a thing. And, therefore, the law would not disturb that consent, the father of prices, which has been created by nature. Laws are only necessary in these contracts in order to make consent valid, leaving fraud and deception behind. These, the latter, falsify ideas generally; they make valuation and consent false.

Three methods concerning the prices of things which are used among us.

Now, if we should consider our customs, we would find that we have made three kinds of laws on contracts involving purchase and sale. These concern the quality, measurement, and price of merchandise. The three are different for this reason. Laws on the first two are universal, pertaining to all vendable goods. We have called these useful and we have never discovered anything harmful in them. This is not so for laws on prices, the third group of laws. This much is true of what I have said above. If we examine more carefully

the statutes we have made concerning prices, we will find some which are good and some which are not. Among us, prices of many things have not been subjected to regulation, even things which are regarded as necessary. These include such things as fresh and dried fruits, herbs, hides and skins, coal, timber, linens, eggs, and infinitely many other things. This lack of regulation does not result in price instability or deterioration, or in monopolies. On the contrary, since such goods are sometimes not native to us, and since they are subject to great pressures, it is observed that neighboring countries have a dearth of them, despite an infinite number of regulations; we, who do not have so many rules, are fairly well provided with them.

Some other goods, perhaps because they are regarded as more useful, have a fixed price, which in the Norman tongue is referred to as *assize*. The benefits of these are: (I) to appease the stupid minds of the lowest common folk, to whom the *assize* is most injurious since they are the sellers of the base goods that are, in turn, those which are submitted to regulated prices; (II) to provide sustenance for many low ranking officials, who in allowing violations of a given *assize*, cause some goods to exact a slightly higher price but one so constant and just that there are none who are not content to submit to it silently, because all wish to obtain better merchandise. Consequently, such controlled prices are obviously of no benefit to society, except in the case of some of the poorest goods. These are goods which are devoted to the most miserable people, and are those which deserve to be maintained at low prices. Surely, when buyers are richer than sellers, the law should favor the sellers and not the buyers. Because the price is always more disadvantageous for one who has a greater desire to sell, for he is more in need. And if anyone should ask again why our noblemen (in whose hands lies the administration of this part of government) are so careful to see that price regulations are observed -- despite the fact that such regulations are so troublesome that even the most honorable are constrained to contravene them -- I would reply that ancient opinions and the edicts of common people, even among the best developed minds, have superior power over all, especially when it is the class of buyers which imposes the *assize* rather than that of the sellers.

Prices, di voce, used in the realm

We still have a third type of price, called *Voce*, which is a fixed but not compulsory price. This is used for grain, wine, oils, cheeses, and almost all

and their utility.

goods of prime necessity. Words cannot explain the utility and comfort of the *voce*. It serves as a standard for contracts in which two persons have spontaneously agreed to abide by the price of the *voce*. Thus, the liberty to contract is joined together with the necessity for a fixed standard; it is its power which makes it the freely arrived at convention, and not a law of the *voce*. We owe to this institution all the circulation of our trade, trade which because it is conducted virtually without money, which the kingdom does not have in abundance, could not be accomplished without the *voce*. Since this is well known, I will not call attention to it by lingering over it. I wish only to commend it to whomever presides over the conservation of such a beautiful and useful custom, one which is uniquely conserved and sustained by the faith which the public has in the justice of the *voce* and in the integrity and intelligence of those who establish it. If this should be lost because of the errors of a few consecutive years (public trust being more delicate than the merest whisp of smoke) we would be entirely ruined.

The application of the aforementioned to money.

In a desire to apply this variety of stabilization to coins and to determine what would be more convenient for them, I believe that leaving the proportion between the metals completely undefined would not be useful, because this is needed: (I) for the ready evaluation of coins, for exchanges, for payments, and for every contract made with money;¹⁻²¹ (II) since it is not possible for the mint to issue new coins without assigning prices to them, inasmuch as the public would not be able to regulate money it has never seen; (III) because a legal declaration is necessary for those contracts in which it was not explained and agreed upon; and (IV) because in order for children, widows, and wards, not to be prey to the clever, it must at least serve as a guide and a rule. Though these reasons do not show a necessity for such a policy, they do show its benefits. Moreover, the example of the Chinese and other nations which are still filled with imperfect and inconvenient government arrangements, do not invalidate what I say here.

On the contrary, to wish to establish a fixed and compulsory proportion is to fear much that would not ruin the state, should it be miscalculated. Disproportion is the one great evil and unexpected effect which money possesses. To retract and amend what the supreme powers have established is a rare and not especially clever thing, and either is not done or is an inoppor-

tune accomplishment. Hence, the best rule is the third one, that is, to establish a fixed but not mandatory proportion, in just about the same way as the *voce* is determined, or, -- to take a more likely example -- like the yield of interest, which is established at only four per cent, but which is not prohibited from being made either greater or smaller by agreement.

Coins should be assigned prices which are not compulsory.

The establishment of a *prezzo di voce*⁴⁻⁵ (if I may be permitted this expression) for all coins, even our own, avoids all the dangers. The *voce* would only be that at which a coin first leaves the mint,⁴⁻⁶ after which it would not be necessary to constrain anyone to remain at the price but, rather, to allow the coin to be treated like merchandise. Whenever the common consensus differs from the mint price, the mint price should be made to conform to that of the populace, which when left free always follows the truth. There would be time to make the two uniform because not all the money would have left the state.

Nor is it necessary to fear that the people might assign a wrong price; since, as long a monopoly is not possible, there will always be justice and equality. Because only the mint can issue money, or can, in a sense, be said to be its only seller, if the mint does not establish a just price, the public will never be able to establish one either. Therefore, if everyone were left free to alter it, as long as it was the true price to begin with, it would be preserved; if it was not, it would change into the true price. Though the princes' mints should be thought of as just mints, controlled by virtuous persons who would never set a false price for money, it is also true that the few can always fall into error, whatever studies they might make, if they do not allow themselves to be led by the many.

It is no shame to proceed in this manner.

Finally, it is not worthy of wise men to inject a false idea of shame here for allowing themselves to be guided by the public in such great work. The price of grain, or wine, or oil is indeed a great thing; still greater are those of land, homes, leases, interest, and exchange. And yet no other law regulates them but the common consensus. How can it be disgraceful to leave entirely free those for whom it is the greatest honor to serve? The magistrates are ministers assigned to the happiness of the multitudes, and to the preservation of their liberty; and, indeed, the prince himself is assigned to this very work by God.

Why something different was

Should anyone wish to know why all people who, just contrary to what I have been saying, have determined this proportion by law, I have found two reasons for

done.

this. One, the stronger, is that men always think they are doing well simply because they are doing something, failure to do which is tantamount to being in a bad state. No magistrate wishes himself to be regarded as having done nothing. To do nothing is often quite praiseworthy and useful, but it is otherwise most difficult and much more laborious to accomplish than it seems. That is, if we should consider that all the good laws which could be made on any matter could be promulgated in an instant and collected on just one sheet of paper, we would discover that when all the good has been done, (not content just to do what has already been done)²⁻⁷ we would still want to continue to govern; inevitably, we would spoil the good and institute the harmful. Even if no harm were done, the wish to control things down to too minute a level is in itself a great defect. The Florentine republic is an example of this. In wishing to perfect the smallest detail (which is in the nature of the minds of its citizens) she never succeeded in setting the broad outlines in order.

We would have to attribute the greatest share of the difficulties of the money of France and Rome to this cause, despite the fact that the courts of those nations are, more than any other, filled with magistrates and tribunes. In one case, this is due to corruption in the performance of its duties, and in the other to the necessity of providing work for so many who come to serve her. My own country deserves both praise and envy in this matter. Our commerce is not tormented by trading companies, monopolies, *ius prohibendi*, orders and statutes which elsewhere are called *police*⁴⁻⁷ and which we would refer to as burdens. Nor is a magistrature built over every small government function. We alone, with a rare and glorious example, have left the proportions between silver and gold coins (the more important coins) free, for the most part, compared to foreign money.

The history of the proportion between gold and silver.²⁻⁸

The other reason relative prices of the metals are fixed is that men do not administer medicine for the ills of their own bodies, to say nothing of those of the state, without first experiencing some great pain. Great pain cannot provide them with a change in the proportion; for centuries at a time this proportion has not changed appreciably, as I will demonstrate with an historical example.

A very large number of critics are persuaded that they have learned the ancient proportion between gold and copper from a passage in Homer. In narrating the

combat between Diomedes and Glaucus, in chapter VI of the *Iliad*, which is followed by a long discourse and an exchange of weapons as a sign of friendship, Homer says:

Ἐνθ' αὖθι Γλανκῶ Κρονίδης φρένας ἐξέλετο
Ζεὺς ὅς πρὸς Τυδείδην Διομηδεα τεύχε' ἀμειβε
Χρῦσα χαλχείων, ἑκατόμβοι' ἔννεαβοίων⁴⁻⁸

Tum vero Glauco Saturnius mentem ademit
Juppiter, Qui cum Tydide Diomede arma per-
mutavit, Aurea Aereis, centum bobus aesti-
mabilia cum iis, quae novem aestimabantur.⁴⁻⁹

They infer from this that gold was to copper as 100 to 9; from which the world has yet to draw the most absurd and incorrect conclusions. For, if this had been the case, walls would have been made of, and streets paved with gold, so abundant would it have been. Today, when we have so much gold, and when we do not have any smaller or greater quantity of copper than we had in those days, the proportion is roughly 1100 to 1; at that time it was more like 11 to 1, that is to say, the Trojans had 100 times more gold. One laughs, then, at this discovery and, at the same time, cries over the fact that the most venerable writers have fallen into the hands of the humanists, whose language they have improved, but whose sentiments they have understood badly. Were it not so alien to my purpose, I would demonstrate here that the armor of both was made of pure copper. But, simply in order to explain that great difference of goodness and excellence that put them beyond every proportion, one is said to have been made of copper and the other of gold.²⁻⁹ Actually, this phrase which describes everything that is excellent as belonging to the category of gold, is usual and frequent in all languages.

Since no vestige of the ancient proportion is to be found in Homer, the first to tell us anything about it is Herodotus. In discussing the income of King Darius,^{1,2-10} he first says that silver tributes were paid in Babylonian talents, and those of gold in *euboici*. But later he proceeds to explain that the Indians, a most populous nation, paid tributes of 360 talents in gold collected from rivers, that is, in gold dust. Finally, in order to determine how many

¹Book III, Talia, Chs. 89 and 95.

euboici talents the rents of Darius would come to, he says

τὸ δὲ χρυσίου τρισκαίδεκάσσιον λογιζόμενον
τὸ ψῆγμα εὐρίσκεται ἕξ εὐβοικῶν ταλάντων
ὀγδώκοντα καὶ ἑξακοσίων καὶ τετρακισχιλίων:

Aurum vero si terdecies multiplicatum computetur ad argentum, ramentum reperitur ad rationem Euboicam esse quatuor millia talentorum sexcentaque, et octoginta.

It is therefore clear that the proportion was 1 to 13.⁴⁻¹⁰

Then, from what Plato has in the dialogue of *Dell'avidità del guadagno*⁴⁻¹¹ it appears that this was somewhat changed in the Greece of Socrates' time. There, in reasoning with Hipparchus, Socrates asks whether a merchant who gives half a pound of gold and earns a whole pound of silver by it gains or loses. Hipparchus replies,

Ζημίαν δὴ ποῦ, ὦ Σώκρην, ἀντὶ δωδεκασασίου
γὰρ δισάσιον αὐτῷ καθίσατε τὸ χρυσίου;

Detrimentum equidem, o Socrates; nam pro duodecuplo duplum tantummodo recepit.^{4-12, 2-11}

In the first coinage of gold, the Romans fixed the proportion at 1 to 15. As Pliny tells us:

Aureus nummus post annum LXII. percussus est, quam argenteus, ita ut scrupulum valeret sestertiis vicenis.⁴⁻¹³

Twenty *sesterzi* are equal to five *denari* and each of the latter is equal to one attic dram. This is, in turn, composed of three *scropoli*. But they could not have been certain of such a proportion, nor can we rely on it.²⁻¹² In primitive and obscurely distant time, in which arms alone had value, and wealth was distributed by plunder, neither commerce, nor art, nor industry, nor the ability of government nor the proximity of nations provide any principle. How, then, can anyone know how accurately prices were assigned to new gold coins?²⁻¹³ In fact, there were constant variations from these proportions, and in the days of the emperors they were constantly one to twelve and a half, with gold weighing two

denari and being valued at twenty-five.² But this derived, perhaps, from the fact that silver coins contained no small amount of alloy, while gold coins were, on the contrary, very pure. In the low empire, the proportion rose because India and the barbarian states used to extract the gold from much of their money.²⁻¹⁴ In one law³ from Arcadio and of Onorio it is held that a pound of silver corresponded to five *solidi* of gold.⁴ In another, of the same emperors, every *solidi* was valued at twenty pounds of copper. In a third,⁵ falsely attributed to Allesandro Severo, (but actually from Valentiniano and Valente, in *Codice teodosiano*) the gold *solido* is understood to be one seventy-second part of a *libbra*, or the same weight as an *uncia*. By comparing these three laws, the ratio of gold to silver is found to have been 1 to 14 2/5; that of gold to copper, 1 to 1450; and of silver to copper, 1 to 100.

In the barbarian centuries silver became much more rare and thus the proportion changed, falling almost by ten per cent. But it only remained in this condition for a very short time. In 1356, Giovanni di Cabrospino, the nuncio of Poland, presented his folio⁶ concerning coins current in his day, to the Roman Chamber in which we read:

Libra auri 96 Florenis: Libra argenti
puri, sive marcha 8 Florenis:⁴⁻¹⁴

Hence, the proportion was 1 to 12. It was maintained at this level, with small variations, until the discovery of America, and it had not changed by much a century or more later. Beginning a century ago, it started rising and today it closely approaches a ratio of 1 to 15, which would be accurate in most cases. I have taken some time with this to demonstrate how false what so many have believed is. Namely, that the discovery

²This is known from Dionis d'Alicarnasso, I, 55, and by the authority of Suetonio compared with Tacito, as well as by the manifest testimony of Dione and Zonara.

³Leg. un. Code de Arg. praetio L. 10.

⁴L. un. Code collatione aeris. L. 10.

⁵L. quotiescumque 5. C. de susceptoribus del Consolato di Lupicino, e Iovino.

⁶Inserted by Grimaldi in his unpublished work De sudario Veronicae, and printed by Muratori in the Dissert. med. Aevi. diss. 28, t. 2.

of the Indies may have changed this proportion, first fixed at 1 to 10. It can be seen that for centuries, from ancient times, it has remained almost equal to the present.

It has been so stable that it has been difficult to fix it legally. In ancient times, a mistake in it was not felt by many. Because neighbors were barbarian, primitive and without any trade, they could not absorb good money and cast off bad money. Consequently, the authority which the Romans had over coins could not be used today by any prince without bringing harm to himself. For this reason, I would counsel some circumspection in placing the proportion among the coins of different metals; it is sufficient to make coins of a given metal similar in goodness²⁻¹⁵ and to value them according to weight.

I turn now to a discussion of changes of proportions, which are made in various ways. Following this, I will examine augmentation of the value of money which is nothing but a change in the way some old ideas of some verbal sounds are expressed, as for example, to set a ducat which formally weighed one ounce, a trappeso and 15 acini of silver, at 492½ acini of silver. Since the ideas of the names of gold coins change, at the same time, no disproportion is introduced among them. Only copper coins and imaginary money used for accounting purposes (that is, for prices of goods) are affected. The magnitude and variety of arguments does not allow me to be brief, although I would hope that my thoughts would be as tight and concise as I can make them.

CHAPTER 2

THE IMPROPER PROPORTIONAL VALUE OF THE COINS OF ONE METAL AND THOSE OF ANOTHER, AND THAT BETWEEN DIFFERENT COINS OF A SINGLE METAL.

Division of parts.

Variations which the value of coins might undergo must involve either some part of the coins compared to all others, or all coins compared to similar coins of the past or to coins of a neighboring government. A change in part of the coinage involves either all of some particular metal compared to another, or two species of a given metal.

Such changes occur in six different ways: either by variations in customs or fashions, based on the nature of things when new mines are dug; by normal destruction; by alloying; by a reduction in weight; by clipping; and, finally, by the authority of law. I will not discuss here changes which involve all the coins, which I will define as augmentation of the currency, since I will deal with this in the next chapter. Instead I will restrict myself here to a discussion of changes in one part of the coinage. Since this involves a change in proportion, I will always denote it by the phrase *mutarsi la proporzione*,⁴⁻¹ and I will proceed, while I describe what this is, to explain how it comes about, what utility and what harm it inherently contains, and how it can be dealt with once it has occurred.

Of the change in proportion which occurs by natural causes.

Changes whose occurrence is due to nature can only take place between one metal and another, and they can only take place when a proportion has been fixed by law. Such variations are equivalent to nature working against law, or law working against nature. I will treat both together. Here, I wish only to say that such change is most gradual, almost imperceptible, since, as we know from experience, it has remained unaltered for more than a thousand years, with only the smallest variation.

Effects of use.

I believe it is naturally appropriate to add destruction to this, which, because it is natural to the metals, is beyond every human remedy. Although it is true that it occurs a little at a time, and that it does not engender fear in the people (like those who look at things only approximately, when they have suspected no fraud) it is still necessary to deal with it and to correct it, when it grows a great deal. Precisely for this reason, many writers propose coins of silver and copper; and many governments use and prize them, also for this reason. But since I have already been critical of such a remedy, I wish to provide a reason for it at this time.

The uselessness of vellon coins.

In the first place, it must be noted that the coins of a state will wear out unequally, not only because their ages differ but also because they are of different sizes. Smaller coins wear down faster for two reasons: (I) because they are used and handled more. Small coins are used to express both small and large values, while large ones express only large values; (II) because the value of coins varies according to weight, they are worn down according to the area the coin covers. I have discovered that the degree of wear²⁻¹ between similar bodies (as coins usually are) depends on solidity, in reciprocal ratio to homologous sides. That is, a coin which is double in diameter to another will lose half as much metal as the smaller one, if they are both used over the same period of time. Hence, it follows from this that only small coins, the destruction of which is greater, are made of vellon, with some assurance that this has a great utility. But in order to determine with calculation, the true father of truth, how useful this might be, I consider first our smallest coins, the *carlino*, and the twelve and thirteen *grana*. From 1686 and 1688 to now, one is about seven or eight per cent worn, and the others about five or six per cent. It follows that whoever says that all of them have been worn down by five per cent in fifty years is overestimating rather than underestimating their true value. More than any other, because of the variety of princes who have been responsible for our coinage, our kingdom has remained full of such small silver coins. Moreover, I do not believe there are any more than two millions, in ducats, here at present. Thus, 100 thousand ducats have been lost. Let us suppose that these three coins had been made of vellon and that half of the good silver that would have been lost by wear is thus spared (which experience shows is greater than the correct amount) then

fifty thousand ducats would have been saved. This must be reduced by: -- the increase in the cost of minting this money, which contains so much alloy; by the cost of the alloy itself; by how thick the coins are, or by the copper put into them and lost because of wear. Hence, you will find that the kingdom would not gain any more than four hundred ducats a year, on two millions in coin. This is a ridiculously small gain which is soon matched by four hundred ducats in taxes. Add to this the contempt in which coins which appear to be false and adulterated are held in the popular mind, the shame which comes to the government from this, the ease of clipping and other forms of corruption, and you will find that not only is vellon unprofitable, but in countries in which it was not used in ancient times, the introduction of vellon is actually bad. You will find, moreover, that our history confirms this. In the principalities of the past century, the *mezzicarlini* and the *cinquine* of silver and copper have brought us much trouble and pain, which could only be corrected for by the extinction of these coins, which were then called *zannette*.²⁻²

Different remedies against wear.

It is necessary, then, to safeguard coins against destruction by refraining, as much as possible, from making them small in diameter, that is, to imitate the wisdom of Greece and Rome in this respect making them as thick as possible -- so that they will not become gnarled with use. We should prohibit the transportation of money overland in carts, and not number them as some of our banks do, but weigh them; and we should take similar precautions against loss. Nonetheless, when they later become too worn, it is necessary to recall them in miniscule amounts at a time, melt them down and add to them enough to restore any loss they might have suffered in the meantime. Such an addition could be raised by some excises and should be regarded as a necessary public expense, in the same sense as is the cost of rebuilding bridges and roads, instead of reducing the weight of the coins, as the barbarians did in their time. Even if they should all be very worn and damaged, they should never be recoined in small amounts, because this will result in disparity among the coins. Instead, a great quantity of coins should be minted, all at one time, with silver gathered from all sources except from old coins. These new coins should then be exchanged for old coins, and the old should be destroyed, as the count of Santostefano²⁻³ did here so commendably, not too long ago.

Other ways

We come next to a discussion of the four other types

of altering proportions.

The harms done to coins by the people.

Various falsifications.

of changes. These are either made by the people or by the prince. The people, whether citizens or aliens, do it either by counterfeiting or clipping. Princes either are or are not our own, and they make alterations either with or without laws, quietly and almost fraudulently. I will discuss the people first.

It is essential for the general order of all things that great and excellent things should be more protected, the more they are held in high esteem, from fraud and other deceptions of wicked men. This has become the case for coins, which are both sacrosanct and regal. In ancient times,¹⁻²² once a coin with a figure which was much raised and projecting from its face was used,²⁻⁴ counterfeiters found it easier to make copper coins from such silver coins and cover them with a thin sheet of good silver, and then pass them on for genuine silver coins. With the passage of centuries, these coins have -- after the discovery of the inner metal -- become more precious, instead of losing in value, because of the genuinely ancient nature of their falsification; they are referred to by the erudite as *foderate*.^{4-2,2-5} The ancients remedied the many problems, which from the quantity of sheathed coins that are unearthed are understood to have been very great,²⁻⁶ by stamping a coin less in raised relief and protruding less, which they called *contorniate*.^{4-3,2-7} Although destructive of the ancient beauty of coins, this new method has been steadily followed by all peoples because every beauty of orientation must be surrendered to true utility. We have thus been protected from similar frauds.

A not less harmful invention is that involving a paste which,¹⁻²³ when spread over the coin, barely detaches a leaf of silver without in the least defacing the more delicate sculpture beneath. With the use of such an art, it is possible to remove upwards of a tenth part of the metal from a silver ducat, though this is actually more to be feared in silver plate and in thicker pieces of silver, than in coins, in which any fraud is revealed by even the slightest diminution of weight.²⁻⁸

Clipping.

All I have already said shows that the most common fraud in money has been committed by clipping them at their edges; for, as is readily seen, even their imitation and counterfeiting is more difficult and less profitable.

Silver coins are more subject than all others to clipping, then copper coins and finally, those of gold. The reason for this is clear. There is little gain in

copper. There is none on gold coins, because gold is sold by weight.²⁻⁹ And even if gold coins were not weighed, few would risk clipping them, since as long as there is danger they might not be accepted, there would be no use running the risk that a thing so precious and dear might remain uselessly in hand. Of silver coins, smaller ones are more subject to clipping than larger ones, for as there is less loss, men are more negligent. Moreover, there is less apprehension about smaller coins being refused than there is about larger ones.²⁻¹⁰

The remedy for this.

Many laws and customs have failed to provide any just and adequate asylum from either this evil or from counterfeiting. This was only provided by the introduction of the press, which is used to mint coins today. With the advent of other new examples, it has become increasingly understood that those studies and examples, which have seemed to the ministers of government abstract, intellectual and devoid of all utility for civil life, have given more to the perfection of civil order than the laws themselves. What it has not been able to achieve with the art of government⁴⁻⁴ has been obtained by some physical discovery or by some mechanical invention. The press provided a means of making an impression which it was difficult to falsify with smaller instruments; and it was, moreover, operated by a single unskilled coiner. The edges of the coins themselves are milled with another most ingenious instrument, which has been prudently employed on our new gold and silver coins. Thus, no part fails to be pressed; there is no place left for clipping the coins which would not quickly be obvious. The ease of recognition of fraud on the coins is the best remedy against fraud, inasmuch as the use of money in trade only occurs in contracts involving exchange between merchandise, or work, and money. How necessary is the consensus of the two trading partners who enter a contract, is clear. How difficult it is to reach a consensus on those contracts that are exposed to fraud, requires no demonstration. Thus, he who clips coins inflicts great damage on them since for a mere tenth part of the coin which has been clipped, for example, all the rest of the coins remain uselessly in hand. Its holder cannot complain to any judge without exposing himself to payment of a penalty for this crime; nor can he compel or persuade anyone to take such a coin as though it were a good coin. This is how such an evil presents obstacles which are most difficult to overcome. But once they do appear, and grow, and become large -- a differ-

*Effects of
the evil.*

ent matter presents itself.

The evils which a large amount of clipped money produces in a country (which it is appropriate to discuss before taking up any remedies) are the following:

- I. Serious and perpetual disputes among buyers and sellers. The latter do not wish to exchange their goods for coins, except when better coins or a greater number of them is given,²⁻¹¹ so that the greater number make up for a lesser weight. Consequently, prices increase. Buyers, on the other hand, will not accept one of these solutions and cannot accept the other. In the meantime, because of the interruption of trade, both parties are in need and both complain; both almost die of hunger. So that the harm of clipping does not correspond to the gain of the clippers; -- for the little blood they are able to draw, all the rest is left standing immobile and frozen.
- II. Since the clipped coins cannot be kept out of circulation, it becomes convenient for foreigners to clip with impunity the good coins which come into their hands, and to send them back to the land in which they originated.
- III. As the evil grows, the same subjects are protected by the large number of people who are guilty. Where many are guilty, none are punished. Universal evils are supported more patiently than particular evils, because with the multiplication of crime, forgiveness is expected.

Its remedies.

Remedies for clipping are, first, the eradication and destruction of the clipper of coins. Without this, any other policy is in vain; and if this is not possible it is better to do nothing at all. In our own kingdom, the truth of this is known from experience. All the viceroys who preceded the marquis of Carpio did nothing but coin new money, only to see them unhappily cut before the end of their government. History tells us with how little fervor they tried to eliminate the reason for the harm. Nor did the great number of proclamations they published present any difficulties, inasmuch as the most useless of all means of avoiding anything is to be content with having made a law against it.

The only expedient it seems could be taken -- when there is not enough power to banish the clippers from the land -- would be to retire all of the silver coins and to substitute notes for them. But this is most difficult to carry out; and, since notes⁴⁻⁵ are so much more easy to counterfeit, even if not subject to clipping, this could be a remedy that is worse than the evil.

*Fundamental
principles
of this
subject.*

Thus, it is useless to think of defense if what I have said cannot be done first; it is more convenient to wait patiently for better times. But even if what I suggest were done, the wounds already sustained would remain and they would still have to be healed. From among the many different ways to do this, one must decide which to choose, which is a truth that must be regarded as most fundamental.

When there are two generations of coins in a country, one good and the other bad, the bad coins cause the good ones to go into hiding, or to be sent out, as long as there is an equilibrium of forces between them.⁴⁻⁶ If the good coins are much more numerous, the others fall in circulation, in proportion as they are taken only reluctantly or refused altogether. If only a small quantity of the better coins exists, they are either shipped out or they remain hidden by whomever has any. All three of these are serious problems and they either interfere with trade, or impoverish the state.

This is how they should be remedied. The first of these, which is the greatest, by not allowing a large quantity of good money to come into contact with a similarly large quantity of bad money. The second cannot ever be remedied by allowing good money to circulate by force of law. This would encourage the destruction of good coins or damage poor ones further. But the bad coins should be hastily retired and replaced by new coins of a good quality. Third, by making it known that good coins, which are so deficient in quantity, will soon become plentiful and be made legal. This is how the great love and esteem for them will be reduced, so that anyone who might wish to, will be able to amass any quantity he wishes and will not care to save even a single one.

*The first
means of
removing
bad money.*

Assuming these principles prevail, various ways of accomplishing this change in the coinage must now be discussed. This is a difficult operation, a delicate one, one very similar to changing all the blood in the human body, which physicians⁴⁻⁷ have not yet been able to accomplish satisfactorily. It will be useful, before proceeding with it, to know how much the cost will be; and it is not necessary to become discouraged because

of its magnitude, since it is, in any event, incomparably smaller than the harm of allowing the coins to be clipped. The cost includes: all the metal; all that which has been consumed by use, and some for making it up, which, taken together, has rarely exceeded an eighth-part and is usually no more than a sixth of the whole weight. This understood, we proceed to a consideration of the powers of the state, which are either feeble, or great and flourishing. In the first case, the best counsel is to make a quantity of silver coins which is equal to, at least, two-thirds of the old quantity, by raising the metal from any source except from old coins, even if these should be stagnating in banks or in the strong boxes of wealthy private individuals. Such a quantity should be distributed among various places and exchanged immediately for old coins, whose circulation should at the same time be halted, so that they can no longer be given, even by weight, without mutual consent. All will compete in exchanging, but in just a few days it will not be possible to remove two-thirds of the total mass completely. From the silver withdrawn, the rest should be minted without any loss of time. With equal haste, all the money which has been abused should be cleansed and credit notes⁴⁻⁸ withdrawn from circulation, if any had been issued at the same time, when there was not enough money anywhere to meet the needs of trade. With admirable wisdom, this operation was accomplished among us in 1689, by the count of S. Stefano, successor to the marquis of Carpio. It is surely the best of all operations since it contains no hardships and all the savings possible.

*The errors
of the count
of Lemos.*

I repeat again that it is necessary to prohibit the circulation of all the old coins in order not to cause further deterioration, as we had already proved by 1609. By means of an edict, the count of Lemos ordered that large coins which were clipped should no longer circulate and then, moved by a false appearance of necessity, he allowed the *zannette* and *cinquine*, base silver coins, to circulate, though these had deteriorated far more than the others. Then the mint and the banks, to which large clipped coins were brought, began to provide small coins which were then even more clipped and corrupted. In four days, the public almost rebelled and it was necessary to revoke the pragmatic of the 9th of June, together with another issued on the 12th of that same month. It was established that all coins would henceforth circulate by weight. This advice was no worse than the first, but it was no better either, because it did not dissuade the wicked from cutting the coins

again. Meanwhile, coins either had to be exchanged by weight, in which case there would be no loss on any which had been held and had fallen in value; or they were not exchanged by weight, which is what was done for small sums, on which a gain was made.

*A second
method.*

When the state has neither good credit nor enough power to sustain such large and sudden expenses, it has often minted a large quantity of new coins. Without removing the old coins from circulation, in such cases, it has allowed them to be valued by weight and has then waited patiently for anyone who wished to do so, to come to the mint to exchange old coins for new ones. Of course, this must never be attempted unless there is a strong certainty that all clippers have been eliminated, otherwise clipping would increase, as long as there is every hope of exchanging the bad coins for good ones. Moreover, as long as the old coins are not removed from circulation, the state would be assuming the risk that the new ones would be drawn out of the country. In the end, it would not be necessary to deceive oneself and continue coining a small quantity of money at a time. This was one of the two errors made by Cardinal Zapatta, our viceroy in 1622. In order to remove the *zannette*, he had undertaken to mint three million entirely new ones. The scarcity of provisions which resulted, in part, from the bad harvest and, in part, because of the interruption of trade caused by the *zannette*, placed the public in an agitated state. To provide a remedy, old coins were prematurely banned and new ones announced, though barely a sixth part had yet been minted, and thirty *zannette* were issued to the head of each family. Never was so much mourning seen, never so much groaning and wailing heard as now. Never had the majesty of power and the faith of the people been in such grave peril. Without being able to use the old money and without new money being sufficient for so much trade, the populace rebelled in desperation. Only after they had committed various offenses against the viceroy were they restrained -- but not before three hundred persons had been imprisoned and a number of others slain. It was difficult for the prince to punish subjects whose only crimes consisted of delinquencies growing out of the desperation of bitter misfortunes, and illnesses which were almost equal to death itself which, in the end, was their punishment.

*The error of
Cardinal
Zapatta.*

In spite of its wisdom, the court of Spain could not fail to disapprove of this conduct and summarily recalled the cardinal, replacing him with the duke of Alba, who began to mend the damage with the coinage of

a great deal of copper money. But to mend it all was not yet possible, even with the skill and wisdom of the ruling nation, to which one might well have applied what Virgil said of the Romans, in relation to the Greeks: if they had to yield to others in the cultivation of the fine arts and of their less useful applications, then the art of commanding also belonged to others. Unfortunately, the anxieties of war did not permit this.

In other words, in minting new coins it is necessary to mint at least two-thirds of the total sum. For some either do not wish to remove the old coins from circulation -- though not a great deal should be left, inasmuch as the contrast can be harmful and drive the new coins out of circulation -- or, if they are willingly removed, the new would have to be sufficient to fill the channels of trade, lest it fall off and die.²⁻¹² The application of some remedies⁴⁻⁹ can be helpful, but once this is done, it is not always enough to live passively. Always remember that any remedy that defers an illness makes it worse. Time, on which many lazy and foolish men depend, can only make a wound gangrenous.

*Zapatta's
other error.*

But I would like to avoid the other error which Cardinal Zapatta made, just as he entered the government of Naples, in 1621. Observing that the refusal of the mutilated money increased prices, interfered with purchases, and caused the poor, common people to die of hunger -- while money was still in their hands -- the cardinal decided to make the money circulate freely by providing security for it and vowing on the *faith of the royal word*, that if the *zannette* should be abolished in the future, no loss would come to private individuals. Almost instantly, the coins which were still tolerable were clipped to an even greater degree than formerly, and this could not help but be damaging to private individuals, as long as it had to be satisfied by an excise levied on them. With good reason, he was bitterly reproached by the sovereign for such an imprudent promise.

*Of the harms
which aliens
can cause
coins, and
their
remedies.*

I believe I have already said enough about clipping. As for counterfeiting, because it is like the problems already discussed in both its effects and its remedies, I do not find it necessary to treat it separately. The reader may make any changes in language required. And this is the extent to which the subjects are responsible for any abuses suffered by money.

Coins of a state may even be damaged by counterfeiting or clipping, when the damage is committed by nearby people. There is no other remedy for this than to ask their sovereign to punish them for it.

In the last century, the Genovese, along with other nations, filled our sovereign's state with *aspri*, coins more than usually beautiful and brilliant, and consequently more agreeable, despite the fact they were almost all made of base metals.²⁻¹³ With complete indifference, the Turks allowed the coins to circulate among them for quite a long time without especially noticing them. But as soon as the Turks became aware of them, the coins were forbidden. The loss that the state could have made with them, which for one close by mounted, was recouped by seizing and holding as much merchandise as the merchants of the nations who traded in *aspri* might have on hand. This was a strange and barbarian resolution,²⁻¹⁴ but one based upon reason, and one which would have had some equity, if the domain upon which these merchants depended had had the same solicitude for them as the Turks had for their subjects. But the merchants did not recover as much of their losses as their fellow citizens gained by the use of the *aspri*.²⁻¹⁵

*From whom
the expense
of the res-
toration of
the coinage
should be
sought.*

Before concluding, it is necessary to resolve the question of whether it is appropriate to recover the expenses of a new coinage from the money itself, or whether some excise should be levied on some other part of a nation's trade. This is a great and difficult question. And in order to shed some order and light on it, I will say something about how new coins are stamped to retire old ones that wear out from use, or are created by the scissors. In the first place, a general coinage should not be undertaken; only a little should be coined at any one time, because it is necessary to recover the expenses of the mint elsewhere. In fact, this is how all governments erred in the barbarian centuries. The expenses can be taken from the coins either by reducing their weight or their carat measure, or by augmenting the value of the coins; that is by a verbal, or by an ideal change.⁴⁻¹⁰ All three of these methods would lead to ruin if made on only part of the money, thus introducing that disproportion which should be so abhorred. But there is no necessity for making a change in all of the money; this would bring serious damage to it.

If all the coins are reminted in order to eliminate those that are corrupted and reduced, either of two plans might be followed and, in fact, most governments have solved this problem by using both plans together. This is what the duke of Alba did here in 1622; and also the count of S. Stefano, who issued the coined money of the marquis of Carpio. Indeed, I am persuaded that this is the best method because taxes, once levied,

run the risk of remaining forever. Moreover, as the expense is great and instantaneous, if all of it were to be recovered by taxes, taxes would surely have to be heavy.

As for coins, it is not in the slightest necessary to diminish their weight or fineness, but simply to augment their prices. In the first case, they would be diminished in size, discredited, and shunned. But not so much in the second. And although many fine people who have wished to write on these matters complain that the people should not be overburdened, I do not believe that they pretend they can create the supreme power which the metal is lacking out of nothing. Indeed, it must be drawn from the people and it can never be drawn without pain and shrieks of protest.

The monetary policy⁴⁻¹¹ of the prince.

Continuing on to the monetary policies of the prince, I believe, to begin with, that surreptitiously reducing its weight or fineness is not a policy that can arise in the mind of a prince who is born worthy of ruling. He can only become a counterfeiter and clipper of coins by supreme will. This is why it is strange that there are not more centuries in which such a thing has not occurred. And if it has been done in more recent times, it has been a fraud committed by those who hold the mint concessions, and not by their prince. It is no wonder that they were used in the centuries of the barbarians. Ignorance had grown to such an extent that the rules of justice were not recognized by them. To them, no other ends seemed greater than tyranny and fraud when, in order to deceive the wheel of human affairs, the mask of defeat and open violence took the place of knowledge and lost good will. Thus, it is not proper today for sovereigns to try to dissuade themselves from them.

Even an obvious change in proportions can be made with an edict. As long as this is regarded as poor counsel, it cannot be regarded as shameful, concerning which the following maxims must be established.

Fundamental maxims.

- I. The change of proportions between copper and the precious metals does not produce any effects if it is not a very great change; it is similar to an augmentation of all the money. This is seen almost everywhere, although there are few nations in which at least a ten per cent disproportion has not occurred. Either the weight of copper is excessive, as in Rome, or it is deficient, as it is here. In France, only the prices of coins made

of precious metals have been augmented. A constant proportion has been conserved among them without regard to whether or not they exchanged for copper.

The reason for this is that copper and the more precious metals are not equally strong. Copper is at least six or eight times smaller in quantity, and greater by as much in circulation. In other words, while there are from six to eight million silver ducats in the realm of Naples,²⁻¹⁶ there are less than a million and a half made of copper. As poor as it may be, copper will always remain; and even when it is valued higher than its just value, it can never attain enough strength to shine with silver and gold.

These two metals are about equal in strength, though gold comes and goes with more facility.

- II. Bad money drives out good money, but it is necessary to delight in the infidelity of that which flees, not the faith of the one which remains.⁴⁻¹² Those principalities in which money has been corrupted with an excess of alloy, in order to make it more plentiful, and whose money does not flee, have imitated those who have planted sylvan and bitter fruits in order to prevent any of them from being stolen.
- III. A disproportion between two sorts of money of the same metal is worse than that between one metal and another. The latter is harmful because of the comfort which neighboring countries gain from it; the former because it provides an example to both foreigners and local citizens of how to profit from such harm.
- IV. There is no utility whatever in the augmentation of particular coins, which I call a disproportion⁴⁻¹³ and which would not be better than a total augmentation; the harms it does are incomparably more serious. The first part of this sentence is obvious, it remains to prove the part which remains. Whereas the augmentation of one part of the currency either freezes or disperses the other part and, in this way, bleeds the state dry, a general aug-

mentation of the currency does not cause any obstacle to the movement of money. Such an augmentation constitutes a gift from the prince to his creditors, that is, to the wealthier people. A disproportion,⁴⁻¹⁴ on the other hand, is a gift imprudently made to foreigners or to wise, malicious and rich subjects, of the property of the innocent, unsophisticated and poor. Augmentation has been accomplished in many principalities; and even without further medication (as was the case in ancient Rome), it has not been harmful. A disproportion on the other hand, is always offensive, unless it is adjusted. Examples of this are found in Austrian Flanders, in Spain in the last century, in Ireland, and above all, in France, which in 1674 issued the *quattro soldi*. Concerning the latter, John Locke concluded that the government was unwise in putting them into circulation in the interior provinces at fifteen per *scudo*,⁴⁻¹⁵ and at the seaports at twenty, in order to prevent any from being brought in by outside counterfeiters; this would soon have made it necessary to denounce these too. Nor would it be of any use to place any hopes in prohibitions of import or export, for these would not be observed. Force may have been used effectively against a few, but the many had to be guided by utility and personal harm. Finally, an augmentation of one part of the coins leads to two different prices — one natural and the other unnatural. Both are legal. A general augmentation of the currency leads to such a disparity between the former prices of goods and money; but of these, one is fixed by law and the other is not. This is why changes made by the community correct the augmentation of money. This is not true of a disproportion; the law does not respond, and no correction is made by anyone.

For all the reasons given above, a general augmentation of the currency is less harmful than an augmen-

tation of particular coins. It follows that the remedy for a disproportion of money is either to call in the bad coins and reinforce them, or to debase⁴⁻¹⁶ the remaining good coins. The same effect results from either remedy. But where the former is good counsel, the latter is an outrage committed on the public.

Remedy for a disproportion of coins which might have occurred in a country.

To state some more specific remedies, it is strange to note that from among so many who are critical of changes in the price of money, there has been not even one who, after having criticized it, has suggested a means of correcting it once it has been changed. Its prohibition alone would almost seem to be enough to protect us from calamities, poor government, and the errors accompanying human life; it was even more important than a discussion of the causes and effects of the evils. For this reason, not wishing to overlook it, I would say that a disproportion between coins of the same metal must be quickly removed and the coins made equal. Nor should good coins be weakened; because to withdraw them, melt them down and return them to circulation requires a good deal of time.

When a disproportion is between one metal and another, every legal coercion is removed and the discrepancy is left alone to work itself out, naturally, tending always to correct itself. If the rate which results meets with public approval, it can then be made the legal rate of exchange; but if, for reasons of timidity, this is not done, then the public would at least have had an opportunity to examine the proportion which would exist in a well governed principality. And that should be emulated. But this advice is less certain to be accepted than the first. Hence, it follows that either the law has misunderstood the nature of things, or nature has been turned away by the old law. One must always keep in mind that a wound is healed in exactly the same way whether it occurs fortuitously, falling off a rock, is sustained fighting virtuously for the nation, or is inflicted treacherously by a traitor. The punishment inflicted by the king is not related to the treatment.

The present state of Rome with respect to coinage, and the reasons for it.

According to established opinion, the monetary difficulties of Rome rose from a disproportion involving silver. Many, therefore, expect me to examine this opinion. But aside from being too poorly informed of the state of such things, I believe that in Rome, more than elsewhere, men are exceedingly wise, as are those who with age and suffering have long combated the vagaries of bad fortune, and caused justice to be meted out according to merit. Thus, I believe that these evils

arise only in small part from the intrinsic defects of coins, and that they are primarily an accumulation and mixture of minor infirmities which, over many years, have enfeebled and bent the human body over. And since the old quite reasonably count just the number of years they have lived as a serious disease, it is not proper to blame the prudence of superiors (as many so villainously do) if they cannot prevent that order of events which Providence has ordained and established.

Considerations on our policy involving gold coins.

The price of foreign gold in our kingdom has been altered more to adjust it to its proper value than to draw it to us. Surely, the *doppie* of Spain and the *ungheri* stopped coming to us because they were valued disproportionately; at the same time, we were left with a plentiful number of *zecchini*. What may have caused this is unknown to me, for I was not present in the counsels held on this matter. Many say -- and I have even seen it written -- that this occurred because there had been little warning. But it seems to me too rash to believe that so much carelessness existed where there was so much great wisdom, prudence, and mature counsel. This could have been done in the hope of excluding and keeping at bay such a variety of foreign coins. This is the best hope. The means taken there are secure, and we have not found ourselves the worse for them; and it seems we have consciously sought an abundance of florins and *zecchini* -- coins superior to all others in value and perfection.

Considerations on silver coins.

There have been no alterations in silver coins since 1691, when those coins, which were worth 100 *grana*, were declared by edict to be worth 132. Few understand what was done then, and why it was done. But all speak of it and confidently make decisions based upon it. Some say it was an augmentation of the currency; others assert that it was seriously damaging. Some judge it one way; others another. The truth is that neither of these was so; it was due simply to the correction of an error made by the marquis of Carpio. In reminting the silver coins the marquis had wished to make them equal to those of Rome, so that it would not be necessary to study them so much when trading. But, perhaps, this is a useless and possibly also a pernicious ambition. For he failed to point out how inferior our copper coins were in metallic content, to those of Rome. Making the *ducatoni* of 100 *grana*, he gave the *grana* an extrinsic value superior to its true value by some fifty per cent. This caused silver to be drained out and only copper to remain. It was then necessary to change the proportions and to lower the price of copper. This was done. If the money of

account had not changed at the same time, there would have been no augmentation of the currency. But once the value of the *grana* had been altered, and allowed to become equal to 1/132 part of the ducat of one ounce, a *trappeso* and 15 *acini* of silver, -- of which they were actually 1/100 part, and having nevertheless maintained the ducat at only 100 *grana* -- an augmentation followed it. Apart from an alteration of the nominal prices of goods and of exchange, this did no harm it would not have done naturally. To the contrary, it actually helped to pay a large part of the cost of minting.

The opinion of Vergara examined.

Broggia has discussed this matter wisely. This is not true of Cesare Antonio Vergara⁴⁻¹⁷ who virtually observed silence on similar remedies in his book on money. He wished to interrupt himself at the very end of the work in order to justify the edict of 1691, which he did with unhappy and shameful success. In his words:

This alteration of the money was, perhaps, valued by some as useful, others even showed some gratification at recovering such a windfall in the space of a single evening...; nonetheless, in the judgement of many, perhaps of all, it has been and will be harmful to the kingdom because of the alteration of the prices of goods and exchange, especially with the Roman market, where in the last several years it increased to 152 ducats per 100 Roman *scudi*. Writing of the coins of Louis, the thirteenth, Blanc believes, in effect, that an augmentation of the value of coins, more than a diminution, was no less pernicious than it was dangerous. He also believes that kings should be cautioned more concerning this policy, because their interests are always greater, since they are the richest in their realm and because they must collect the contributions of their subjects.

If it is courageous to announce this evil so ineptly and badly in just a few lines, an evil which cannot be said any worse, then Vergara surely deserves praise as a brave and valued man. As the alteration occurred and was pernicious, we should feel the pain from it, since we have never eliminated it. But our happy state denies this where it concerns money. The alteration of prices and exchange is simply verbal, not actual; it is the na-

tural medicine for that augmentation which he blames. To say that the exchange rises to 152 for this reason, is to show a lack of understanding of what exchange and the augmentation of money are. In fact, without altering the money by any more than four per cent, even in our day, the exchange has been seen to fall from 152 to 118, and even lower -- so little does one thing have to do with the other. The authority of Blanc has little weight, and what he says is worth nothing at all. If, according to him, augmentation decreases public contributions, then a diminution of money will increase them. Because, since the public is displeased by this, it must be more dangerous and harmful. Thus, Vergara has said nothing which is not foolish and false. So much for the great difference between knowing how to interpret the literature on money, and knowing how to judge sanely the establishment of its value.

CHAPTER 3

OF THE AUGMENTATION⁴⁻¹ OF THE CURRENCY, OR OF THE ALTERATION OF THE PROPORTION BETWEEN ALL THE MONEY AND THE PRICES OF THINGS IN GENERAL.

Different opinions concerning augmentation of the currency.

I have now discussed the nature of the augmentation of a specific part of the coinage, as I originally proposed. I have also considered how much harm there might be in such a policy, and I have shown how such harm might be treated. It now remains for me to discuss, in more general terms, the policy of augmentation by the prince, of the prices of all coins, either by proclamation or by reminting all coins simultaneously, with their weight or fineness, in carats, diminished. More than that just discussed, this subject has been discussed by a variety of writers who have come to different conclusions and who have actually rendered it obscure, despite the fact that it is wrought with the gravest consequences. For this reason, many abhor it as calamitous to the state, while many others exalt it. Among those who oppose it are included many who believe that once this policy is adopted it will be necessary to deal with money again, to restore everything to its former state. Many others, on the other hand, believe that this would only compound the evil. However, because in many disputes, examination of each of the writers, one at a time, would result only in ambiguity, confusion and obscurity, I shall compress all that has been said and thought until now, into four headings. First, I shall argue that the benefits promised the prince, or his subjects, from such an augmentation of the currency are falsehoods and illusions. Then I shall discuss those harms to which both the prince and his subjects are exposed, according to most writers, pointing out that I regard these as untrue and proposed out of ignorance. A discussion of the harms which are true and valid will then follow; and, finally, the true

utility which can sometimes be expected from augmenting the money will be taken up. Thus, it will be possible to determine (in view of the fact that good and bad are always found together in human deliberations) -- whether there is ever a time and situation in which benefits exceed harms and whether an augmentation of the money is ever warranted.

Its
definition.

The nature of an augmentation of the currency,⁴⁻² a phrase which has already been used, can be expressed by means of a definition, as follows: *when used with respect to money, augmentation of the currency denotes a profit which the prince and the state enjoy because of the slowness with which the multitudes change the relationship between the prices of things and of money.* That interrelationship of ideas, which is the greatest achievement of our minds and the foundation of every science, and which for many years now has been the very thing that has separated men from brutes -- is the very thing on which the most singular and extraordinary counsels are built. Thus, it would pain me to think I had given this definition out of cunning, since it can be shown that the same definition which I have just given, for the augmentation of the currency could also be given for the sale of noble rank and titles, for the granting of honors and for infinitely many customs. Yet, no one doubts the utility of these; no one disputes the power of the prince and his discretion in these matters. That the sale of noble rank simply involves the interrelationship of ideas already formed, would be understood by anyone who realizes that if a prince should declare all of his subjects noble, the honor of none would be increased. Instead, he would be reducing the significance of the word *nobility*. If he should found a badge of rank and should not first bestow it upon men who are already glorious and venerated (so that all these ideas would be connected) but gives it, instead, to his staff members, then whatever form this badge might have, it would be reduced to just livery -- because the public conceives ideas from truth. And this is how sounds become words. When, therefore, the prince uses his power over words appropriately -- either rewarding others or sustaining their power against misfortunes -- since words are the supreme law, he benefits the welfare of the state. But when words are abused, the connection is severed; their significance changes, things remain unchanged, and the insuperable power of nature emerges victorious.

Its nature.

This is precisely the case in augmenting the currency. It only produces verbal changes in things. Thus,

in order for the real prices of things to remain the same, their nominal prices must change. If this should follow on the very same day on which the augmentation of the currency takes place, for example, and if it would take place proportionately in all things, and then the rise in money will not have any effect whatever, just as nothing would be changed by a law naming all coins in Latin, Greek or Hebraic, instead of in Italian. Thus, when nominal changes occur in prices, things remain as they were formerly; if there are no nominal changes of prices, then the prices of things change. The increase in prices is, as one phrase has it, the medicine for curing the augmentation of the currency.⁴⁻³ When the increase is applied to all goods, and once they are rearranged, the increase can be said to have disappeared, just as the fog lifts as the morning sun rises. The effects of the augmentation result, therefore, from the delay in changing prices. And this delay results from the fact that once men become accustomed to paying a ducat for a particular item of food, then whenever they have a ducat in hand, they will always want to be able to exchange the ducat for that item of food. As long as they do not lose faith in this, they are hurt by the avarice of anyone who denies it to them; or else they foolishly accuse others of having caused the prices of things, in general, to rise. Moreover, a prince who, while taking advantage of augmentation employs it every month, for instance, to destroy every connection between the ideas of prices and commodities, renders augmentation completely useless and ineffective. He could only achieve by other means what is today achieved by augmenting the coinage.

Now that I have established and demonstrated that the augmentation of the currency is nullified by changing the prices of goods, when I speak of augmentation I should always be understood to be discussing it before its effects have occurred. The explanation and defense sufficiently completed, I should like to turn next to those matters which I earlier said I would discuss.

FALSE BENEFITS PROMISED THE PRINCE AND THE PEOPLE FROM AUGMENTING THE COINAGE.

I believe resolutely that the contempt which people in general, along with the greater part of writers reputed to be wise, have for the augmentation of the cur-

rency arises from the fact that it has rarely been undertaken in order to satisfy the true needs of a virtuous prince. It has almost always been due to greed or to false counsel of only apparent utility. This is what has given rise to the common opinion that it is unjust, tyrannical, and calamitous. Thus, I think it would be most useful and profitable to show how false is the alleged utility of augmenting the money, the benefits of which princes are ordinarily assured. I will then reveal the truth to them and, with the use of examples, enable them to understand how ridiculous is the promise of profits made to them.

Augmentation of the money does not multiply the wealth of the prince.

If, for example, a prince were desirous of having soldiers of a tall stature without incurring any added expense on this account, as in the case of the late king of Prussia, a wise minister might accommodate him in the following manner. The minister might propose that the prince issue a law ordaining that the *palmi*⁴⁻⁴ is no longer composed of twelve but is, henceforth, composed of only nine inches.⁴⁻⁵ Thus, in just one night, all of his soldiers who have already retired for the night, some of five, some of six *palmi* in height, would awaken the next morning to find themselves miraculously extended to eight, some even to nine, *palmi*. Indeed, if this height should not yet satisfy the grand ideas of the sovereign,²⁻¹ he could elongate his soldiers anew with another law, first, perhaps to seven *bracci*,⁴⁻⁶ then to seven *pertiche*,⁴⁻⁷ and, finally, even to seven miles long, if he should wish. I realize, of course, that all will roar with laughter at what I have just said. But all this also applies to augmentation of the money, which has for so long been celebrated. In other words, men will readily laugh if you speak of lengthening them, but not when you speak of enriching them, so much greater is the allure of the greed for things than that of height! But the order of nature is such that words do not have the power to change things, although in science and in the knowledge that emerges from men's minds, things and words may remain (though not without serious harm) unhappily united and rooted together.

But its expense decreases without any uproar.

It is, thus, a false conviction to hold that the income of sovereigns grows. What is, in fact, true is that expenses fall, since the prince now remains less obligated than he was at first. And, although the prince cannot ever remain more obligated than the welfare of his state allows, and since of the many ways by which he can meet his obligations, the verbal change may appear to some to be the least royal and generous

-- but these are also times of market conditions in which not to pay by means by augmenting the currency is not the worst of all expedients.

It does not even enrich the people.

As for that which concerns the benefit of the people, who believe they are enriched when the money is augmented, according to what John Locke has said: this resembles the resolution of that madman who used to boil *quattrini*⁴⁻⁸ in a pot in order to cause them to grow. Enough said of false utilities.

FALSE HARMS WHICH ARE SAID TO BEFALL THE PRINCE BECAUSE OF THE AUGMENTATION OF THE MONEY.

Utility and disutility must always be spoken of in relative terms.

It is surely a most shameful thing that many who presume to discuss affairs of state and measure their benefits, do not know what utility is. They regard it as an absolute, not a relative quantity, which is what it is. They do not know that when causes are a mixture of good and evil, which is true of the greater part of human events, one and the other is to be calculated and weighed exactly, the smaller to be subtracted from the greater in order to determine which exceeds the other, and by how much.

Bread, for example, is useful, but it is not useful to have one's mouth stuffed with it.⁴⁻⁹ Water is not only useful but necessary, yet to a man with dropsy it is insalubrious and lethal. In other words, the utility of a thing is measured principally by its use and by the circumstances under which it is used. When a thing is abused or used badly and indecently, it is not the thing which acquires a noxious name, but the man who uses it, for he shows himself to be either dull or pernicious.⁴⁻¹⁰ This is why the author who demonstrated that raising the currency, considered in an absolute sense, is pernicious and unjust because that would have impoverished and made the people worse off. This is also why that author should have attempted to determine whether augmentation would have been useful to the state at such times, times when it would have been necessary to emburden the people with taxes, for their own welfare, despite the fact that all means of collecting taxes were lacking then. However much this author's treatise may have been filled with profound studies, it would have been as little needed in a prosperous state, as it would have been noted in a poor and struggling one. An evil prince would not have read it; a wise prince would not have derived any benefit from it.

In many respects it is wrong to say that augmentation of the currency is always harmful to the prince.

I turn now to an enumeration of the harmful consequences, according to these authors, of augmenting the currency. The first and greatest is that, for a monetary gain, the prince loses forever a larger part of his income and is seriously harmed by giving the people, gratis, the power to return to him a payment, equal in appearance but smaller in reality, which he allows them to mint. This discovery seems to them as ingenious as it is sublime. And I know of no writer who has not fallen into the snare of this false appearance of truth. Davanzati believed he had demonstrated that upon raising the value of the currency, the powers of private individuals and even the public income fall, because what princes gain once from debasement,⁴⁻¹¹ they lose every time they collect their income in debased money. This same matter has been treated well by Muratori, DuTot, of France, and strange to say, the abbé de St. Pierre, who out of the entire body of the science of money has with unhappy success, discussed only this point. A memorable example of this is how much the desire to applaud the multitudes can influence even the most illumined minds, together with the quite general wish to reprove and insult the always revered policies of the supreme powers and, finally, to assume the role of critic for that counsel they could never have authored.

The reduction of tributes is not always harmful.

Allow me to amuse my readers by the simple enumeration of the patent falseness of the useful discovery which commends itself to our attention: the diminution of the public revenue. First, however, I will say that although the welfare of the just prince is indivisible from that of his people, one cannot be mentally distinguished from the other, nor is it even necessary that it should be. Even I, who am about to say something about this, will attune myself to the manner in which these writers speak, foolishly opposing one another and ruthlessly referring to princes as wolves. My point is that I cannot understand how a proclamation can be written so that it will impoverish the prince and the public, without causing money to leave the country. It has been shown that when augmentation of the currency does not involve a false proportion, it does not result in any loss of money. How, then, is it calamitous to the people and the sovereign; where does the money go? Is this that annihilation to which the order of nature is repugnant? They identify the extent to which subjects are relieved of their enrichment as the good of the sovereign, and they say this is caused by augmentation of the currency

adding that the prince himself is not enriched by it. Thus, he no more profits than his subjects suffer any loss from it; he loses at one time, he restores his losses at another. Therefore, at worst, augmentation of the currency is simply unprofitable; or, if it is harmful to the sovereign, it is useful to his people, who reduce their payments. Surely, the public revenue is nothing but tributes; and to say that the former are diminished is to say that payment of tributes is lightened. Can a stranger thing be said than that the people rebel, that the writers complain and insult the sovereign, in order to have excises reduced by him? Nor is it true that incomes of the subjects do not rise, while they themselves say that the prices of things become higher and that the sellers are the subjects. Can a more incredible thing be heard than that a subject takes so much care, makes such a clamor, in order for the sovereign to reduce his excises? I do not believe there are any examples of such singularly zealous subjects anywhere.

But to turn our attention around to the other side, can one speak of a more atrocious injury to a virtuous prince than to speak of the diminution⁴⁻¹² of his rents as harmful, that is, of the tributes of the people so dear to him? What other better care has a just prince than that of always diminishing and lessening his rents, or of reducing public burdens? And if he does not always do so, it is because his expenditures are too necessary to the welfare of the state. He always reasons badly, therefore, who believes it to be useful to the prince to maintain the same tributes, rather than always to increase them. The measure of the utility of the prince is the benefit of his people; and, hence, when the people require relief, the impoverishment of the prince is his enrichment.

Public revenue is not always reduced by augmentation of the currency.

False reflections on augmenting the currency do not end here, just as the things which are preferred by persons of no intelligence in political affairs are completely erroneous, regardless of the side from which they are viewed. I have demonstrated that the reduction of royal income cannot always be regarded as harmful, nor always absolutely counselled against. I shall now show that it is false for the augmentation of the currency to be followed by a reduction in income. This is a very great error, as much because of its fatal consequences, as because of the large number of those who believe in it -- who believe, that is, that an excise is always more fruitful when it is increased, and less fruitful when it is reduced. Indeed, experience has

shown infinitely many times, in all realms, that once the price of a good which is not absolutely necessary is increased by a duty, it is taken out of human use; and, therefore, the duty that it was believed would be increased, is lost.

If, for instance, it should be decreed that whoever wants to pass through the doors of our city, let us suppose, at two hours after midnight, must pay a fee of one *bajocco*,²⁻² then 100 thousand ducats would be yielded by this duty. But if one ducat should have to be paid, not even a thousand would be taken in. The reason for this is clear enough, and this is the same for all duties.

If, in fact, according to what these writers themselves admit, commodities should rise in price, then what the peasant receives will be more than he formerly received; and what he pays, if royal income diminishes, will be less. Therefore, it must follow that it will be paid more easily. If peasants exist in incomparably greater numbers than do others in the state, and if to pay them without suffering any violent execution is the health of the state and the greater welfare of the sovereign (which things are all established by its basic fundamentals) — I cannot conceive how a greater yield from taxes can fail to result from an augmentation of the currency.

Thus, these writers are in error for four reasons: they err against the people, because they call relief from higher taxes harmful, and they dissuade the prince from it with every possible force; they err against the prince, because they only think of him as a tyrant, and they believe they intimidate him whenever they predict a diminution of his income; they err against themselves who, though subjects by birth, blame the prince for the good he wishes to do for them, and also offend him, resuming that operation which is offered for their benefit; and they err against truth, because — since it is false that the diminution of public revenue is always harmful — it is also false that it always follows after an augmentation of the currency. These are the same perils of dealing with such material, about which we have no knowledge, either from any long history of experience in practical affairs, or as a result of deep thought.

Another view which is believed to follow from a legal increase in the price of coins seems even more strange to me. This is that as the people become poorer and able to pay only with difficulty, they are slow to pay taxes. This is a false view, and those who

The public is not impoverished by an augmentation

in the value of money.

spread it are shameful. For it follows logically that augmenting the currency causes the prices of all things to increase. Two effects result from this. First, many abstain from buying them and, thus, duties placed on them yield less. Secondly, as people become poorer they pay only with greater difficulty. But, to understand the error in such ideas, it must suffice to recall the certain truth which I have already demonstrated above: namely, that augmentation of the currency is a verbal change not one of substance. Therefore, all its effects must also be verbal changes, and not changes of substance. Goods become only nominally more dear; and subjects become only nominally worse off. Whether or not poor payments can emerge from this ideal poverty, is easy for all to see. The only real effect produced by augmenting the currency is to free debtors from payment of some amounts owed before the change in the price of money. Just one such change, since it is between two equal subjects, cannot produce less income for the state. The prince, who is the greatest debtor of all, also frees himself from any obligation. If by this means he renders some poor, it cannot be said that this is a loss to him; at worst it brings him no gain. It diminishes the yield of his taxes by as much as the debt is reduced. This is always a false fear of the loss predicted. Only the author of *Saggio sul commercio*,⁴⁻¹³ a man who is vastly superior to all others in shrewdness of intellect and experience in human affairs, understood such truths and he has not feared to maintain them against the current. He believed that augmentation of the currency relieves the plight of the peasant. I shall demonstrate later that this is true.

In the third place, it is said that the prince cannot reduce his expenditures as he reduces his income. This is because he is compelled to increase the pay of his ministers, to pay dear for domestic goods and even more for those from abroad, for which the need of habitual use is never small. He who says such things shows he does not have any experience with the natural course of the effects produced by augmenting the currency and, for this reason, it would be well for me to explain them. Two states of such an augmentation can be considered: before a change in the prices of coins, and after such a change.

The prices of merchandise do not vary immediately after the price of money has been increased. They adapt themselves to the new measures slowly and by degrees, such being the disposition of human minds, according to what I have already said above. All the

Effects of augmenting the currency according to natural

circulation.

effects of the augmentation of money are in limbo during the time the change in money is made by the prince and a change in prices is made by the people. When prices do follow, the first change vanishes, in effect, that is, is cancelled out. The course which these changes follow in the future is as follows.

The prince makes a change in the names of coins. He seems no less the debtor than formerly on this account, paying with the same nominal amounts, if not with equal money. But in reality, without having increased his income, he has diminished his debt. Hence, all the harm of augmenting the money falls first on those who receive money from him. However, they do not feel anything from it since they are able to buy the same things they formerly bought. So that if this change should occur on an island remote from all foreign trade, for instance, any change of ideas held formerly would be most delayed and, perhaps, the natural idea of the value of the metals would change sooner. But trade causes exchange,⁴⁻¹⁴ which is the thermometer of nations, to change first. If this change did not occur, one state would devour all the money of another. Once the exchange is altered, prices of foreign goods immediately change too. For, let us suppose, that a merchant has bought something in a country for an ounce of silver, and that he brings it into another country in which the ducat which had weighed an ounce prior to the augmentation of the currency, now weighs no more than four-fifths of an ounce. Then, surely, that man is no longer able to give up the merchandise for a ducat, since the exchange which is already over its true value causes him to find himself owner of only four-fifths, and not of a whole ounce, of silver. Foreign wares having become more dear, those who can no longer purchase them, seek to take a profit from their stocks (that is, from products native to their country) and to sell them at a higher price, not only to foreigners but also to their own citizens as well. Because of the alteration in the exchange, and because the weight of metal remains the same, the price does not seem higher to foreigners. In a manner of speaking, an ounce of silver is worth a *scudo* in one country, a ducat in another. If in the latter the price of the ducat should be changed by a tenth part, the exchange rate — which had been one hundred *scudi* to one hundred ducats — goes from one hundred to one hundred and ten, an apparent, not a true change. Consequently, anyone who comes from abroad to buy what was formerly worth one hundred du-

cats, and finds it to be worth one hundred and ten, would ignore the change as long as he received in return, in his own country, his one hundred *scudi*.

The price rise causes serious complaints among native citizens who, though they can neither be said to be justified nor unjustified, can be said to be in error. They are not justified because a price rise is false when sellers ask the same weight of metals, irrespective of the name of the coin. On the other hand, no injustice is involved because they pay debts and wages which are only nominally the same as they were formerly. It is difficult for those who receive the same price for what they sell, but not the same weight in metals, to buy with coins of the old weight and at changed prices. Such complaints are erroneous, for while the deception of language makes it appear as though they are not hurt by the real harm — which is the reduction in goods — they complain about something false.

In such a lamentable state, in order to console themselves, all increase the price of what they have to sell or lease, such as houses, land, or personal property. And, while this class of people consoles itself, the harm returns where it began: — to the prince's hired staff, who continue to receive the same money, but who are not able to purchase the same commodities. Their complaints finally force the prince to raise wages and, thus, in the end, all the harm falls on him.

What, then, is the benefit of augmenting the money? This exactly! In order for the prince to feel any harm from it, a full circuit is necessary — and that does not take place instantly. Hence, although an augmentation of the currency is to be accomplished only in cases of extreme difficulty, a remedy which includes delayed harms is a good remedy. Because, since such unbearable harms cannot endure, before the disadvantages of the change return upon the king, either the ills of the state are healed and the correction is a facile one, it sufficing to increase taxes according to the change so that they remain equal to what they had been before, in terms of the weight of the metals. And, hence, everything is as if the difficulties had not occurred at all and only ideas and names had been changed, without any harm. Or, the state dies and is destroyed and it is not necessary to be sorry for tending it with every extreme art and technique. Once it is understood that the end of life, which Providence wills for all human things, has come, it remains only to accompany

The expenses of the prince do not rise too soon after the augmentation of the currency.

it decently to its grave.

To resume my discussion, it is not true that the prince must, of necessity, raise wages soon after an augmentation of the currency. There is a great deal of time. Raising taxes need not cause any alarm because this is only a verbal change made to correct the augmentation of the currency which, taken by itself, is a gift of a part of the duties, a necessary and fortuitous gift, which is made necessary by the serious infirmities of the state which cannot function efficiently at the old weight.

As for the purchase of foreign goods, this is little, and not very necessary in fertile states.⁴⁻¹⁵ The smaller the state, the more desirable. It really never absorbs all the gain from an augmentation of the currency.

I wish also to warn here that in states in which the prince is free to impose taxes, no policy can reduce them, except one which takes this power away from him. He does not have to control his expenditures by his income, but rather his income by his expenditures, which he shall take care to keep as small as possible when he is just.

Although it is against nature, augmenting the currency is not forbidden.

There are some who believe they are saying a great deal when they say that an augmentation of the currency is a crime against nature. Though true, this adds nothing to our knowledge. Indeed, of all such atrocities which can be committed against nature, the greatest is the death of a single man. Nothing seems more absurd than for the minister of welfare to cause the worst harm to befall those over whom he has authority, and for no other reason than to provide them happiness. At times, this is also justice. The same is true for augmenting the money.

Augmenting the currency is not unjust.

Finally, augmenting the currency is opposed as tyrannical and unjust. And this is the greatest opposition (because in the minds of those who rule, nothing should have more power than virtue). Hence, it would be as true as it is great. However, if we should carefully examine its injustices here (and we would certainly find there are some in it) we would find that there are not nearly enough of them to stand in the way of what might be done.

The injustices are:

- I. That it makes the subjects worse off and hurts them a great deal, since it does not pay them what is due them;
- II. That it diminishes wages;

- III. That it takes from one and adds to another, without merit on the part of the latter or blame on the part of the former;
- IV. That it mars the most precious treasure of the prince -- the faith⁴⁻¹⁶ of the people -- which does not survive if it is not mutual.

The first reason.

We shall begin with the first and examine these in turn.

It is false to say, and unworthy of whomever is born -- I do not say a subject, but -- a man, to describe as absolutely unjust the increases in and diminution of private incomes, which are nothing but excises and tributes. If we are not in every way similar to the Iroquois of America and the Hottentots of Africa, we are responsible to them for just these burdens. Similarly, a state does not save itself from a disaster without harming many who, having enjoyed the infinite benefits of human society, should justly be sacrificed for it. Thus, to say that augmenting the money is an excise, is to not say anything new. And, to say that it is unjust is, for this reason, not to say anything wise; to say that it should not be done unless it is necessary, is to say nothing unusual or stupendous. Under a just government, such as we now have, to say that augmenting the currency is not proper, is lost labor, as it is a demonstration that this is not time to demolish our churches, devastate our fields, murder innocent people, or appropriate money from our banks. The supposition of this alone inflicts injury on the virtue of the prince. But if, during the risk of a serious and just war, it should be desirable to dissuade the government from establishing an encampment on rich soil or a tower on some superior site, when it would be necessary to demolish a church built on sheer piety -- would this justify an enterprise involving the exposure of the most faithful subjects to perils, with silver taken from banks or from sacred furnishings? One is as shameful as the other is useless.

Under an unjust government, then, if the fear of a troublesome augmentation of the currency is prudent, the remedy which one would want to apply to it, on the basis of printed treatises and books, is not even read by princes, let alone respected; it is foolish. It is necessary only that: *bonos imperatores voto expetere qualescumque tolerare.*⁴⁻¹⁷

The second reason.

For a prince to fail to pay what was previously agreed upon because he may not wish or be able to do so, is as grievous as it is irrational. If he does

not wish to pay, he has thousands of ways of not paying besides augmenting the money. If he cannot pay, it is foolish for his subjects to expect to be paid by him regardless of how he does so. If he has nothing that is personally his own, except for the supreme authority over goods and provisions, he makes a useless, vicious circle by paying, because he gives back to his subjects their own goods, but with this sole difference: he takes from all, but gives to a few who are more deserving than others. However, if the creditors of the prince should be the wealthiest of his subjects, it would be most unjust for him to take from the poor in order to give to the less needy. In situations of disaster, precisely those who do not serve the prince are those who are impoverished, including peasants and the lower artisans. Consequently, the prince is to be commended if he pays less than agreed and if he reduces wages when, as a result of his not having any more money, he realizes that it is not expedient to bleed dry the unhappy peasants, who are already so desolated by the barbarity of wars, in order to completely satisfy the richest financiers. Hence, it is obvious that those writers who display the most rigid rules in crying out against high wages, and who argue that such expenditures are like so much blood, taken from denuded and famished farmers — are contradictory. For all this, they blame the policy of augmenting the money, and, what is even more marvelous, they know that this is the medication for that evil.

To take from one and not another subject is not always tyrannical.

From how much has already been said, how the other evil should be judged is obvious, that is, that one takes from one to give to another. In absolute terms, such a sentence deserves only to be detested, for it is precisely the definition of tyranny, which is: *that state of government, whether it might be of many people or of a few, or of a single person, in which the rewards and punishments are unjustly distributed.* If those from whom a government takes are less needful than those to whom it gives, then the policy is just. The only thing that results from this is that the burdens of the state are carried, as they should be, by those who are able, those who do not only pay the prince but who also indemnify the poorer taxpayers for the harm done by the burden of general taxes. I shall soon demonstrate that this results from the augmentation of the currency.

Policies arising out of necessi-

Finally, in augmenting the currency, faith in the ruler does not waiver except when this is not appropriate. Failure to fulfill one's promise, when it is

ties do not blemish faith.

necessary, does not diminish faith, it increases compassion. We saw this occur in the republic of Genoa not too many years ago. Misfortunes that proceed from natural causes do not make men fearful, but vices and bad faith do, when they cannot be checked by anxious fear or superior authority. The prince will be just and people will have faith in him. He will augment the currency when necessary and none shall complain. He will not pay when he cannot, and his not being able to do so is not his fault. He will not be pitied any more; he will be helped with great fervor.

It is not necessary to discuss augmentation when it is done without reason.

Fear arises in my mind that many might believe others have intended to discuss augmentation of the currency differently than I have, albeit, unnecessarily. If this is how they have thought (and I do not believe they have) they would, for this reason, be more to blame than I. For no doctor who writes of the virtues of medications would discuss them in order that they may be given to the healthy; just as jurisconsults never deal in penalties which are to be unjustly inflicted on the innocent. It is not worthy of anyone who delights in writing about something accurately to suppose that it is always administered at the wrong time and for the wrong reasons. And no one can write a book on this matter, on this assumption, in such cases. What would be involved could be said in only two lines, without exception: Everything which is done for the purpose of being destructive and unreasonable is inappropriate. The botanist who would discuss the virtues of the unsophisticated in this fashion would have concluded this book on the first page.

FALSE HARMS TO THE PEOPLE.

Augmentation of the currency is not always a tax, and when it is, it is not always to be blamed.

I will briefly discuss now some evils which are said to occur to the public as a result of augmenting the currency; I will discuss them at greater length in the next chapter.

First of all, some would treat augmentation as though it were an excise. This is most inappropriate, because taxes cause the disintegration of the wealth of many individuals who together comprise what is called the power of the state. Royal notes are a power created by the state on the basis of the total amount of taxes collected and are, therefore, a tax collected in advance. Augmentation of the currency represents a repudiation of this debt. Consequently, it is not a tax but a de-

vice to prevent raising any tax and simultaneously, payment of those debts: or, it is the use of imaginary powers created many years ago. Consequently, it is appropriate to grieve over debts contracted for exorbitant expenditures, not because of their extinction; the latter should be done at all costs and this is done by means of the augmentation of money.

That such an augmentation is not an excise follows from the fact that such writers warn the prince that his income will fall. And nothing could be more foolish than to say that what reduces taxes is itself a tax. Nor does it help to say that this is different at different times; that augmenting the money hurts the people at one time and the king at another. And in any event, for what people is it not true that a perpetual comfort is worth the endurance of a momentary pain?

But even if one were to grant that the augmentation of the currency is equivalent to an excise tax, are all taxes evil? To say this would be just as incorrect as the statement just made above, which asserts that to levy them is unjust. Actually, their injustice and evil comes from peculiar circumstances and not from their nature.

Augmentation of the currency does not impoverish a state.

In the second place, some say that augmentation would impoverish the state. Indeed, this is said by all, as with one voice, but it is not understood by anyone. The wealth of a nation consists of its land, its houses, its men and its money, as I have already said. And augmenting the currency does not devastate fields or demolish houses, nor does it kill men. Hence, if it does not hurt money, it clearly cannot generate poverty. But it does not hurt money because it does not cause it to be spent abroad or place it into the hands of the prince. In fact, from his pronouncement, it reduces the princes' rents. How, then does he become impoverished?

The only effect of augmentation is to diminish the quantity of money which circulates between the subjects and the prince: paid by one, spent by the other. But this is a great and singular benefit when the amount of money is small. When a stream is not navigable because of the small amount of water it contains, its course is slackened, and it is seen to become proud and majestic. In like manner, if the channels of trade languish, exhausted for lack of money, they begin to take a long and useless course, only to be filled again soon,²⁻³ as money moves once more, albeit at a slow and deliberate pace.

An increase in the price of local wares is not harmful.

Increasing the price of foreign goods is helpful.

Trade is not interfered with.

When augmenting the money is harmful.

Melon's first

Third, it is said that local goods become dearer. But, of course, their price is not paid to foreigners. Fourth, foreign goods become dearer. And in that case, less money goes abroad; a state is less depleted of it; more goods of their own manufacture are left to be sold to foreigners. The economy of nations is exactly concerned then: that more is to be sold than is bought; or, more is exported than is introduced into the state.⁴⁻¹⁸ And if this is always useful in well governed states, all duties should be removed from exported native goods (as was done a short time ago by Benedict, the fourteenth, a pope full of true love for his state, and worthy of better days) except for those duties on raw materials and those placed on imports from abroad, excluding the materials of labor. Who could ever be convinced, therefore, that raising the price of foreign goods is harmful to the principality in times of shortage and disasters?

Fifth, that the prince pays less, as discussed above.

The abbé de St. Pierre adds the sixth reason, one of four enumerated by him. This is that trade is interrupted during the anticipation of an augmentation of money, in hope of selling later at a higher price. This is a thought which, along with the other three, is entirely false. Once an augmentation is adopted, a merchant either sells at the old prices and is worse off with respect to coins, or he raises his prices, in which case he has a large number of coins but the same weight in metal and is, therefore, no better off. Thus, it does not help him to wait.

We now pass at once from so many false ideas to some true ones.

TRUE EVILS PRODUCED BY AUGMENTING THE CURRENCY.

Whenever a reduction of salaries of the prince's ministers is useless and pernicious, augmentation is also useless or pernicious and is therefore unjust.

In prosperous times, augmentation of the coinage is a burden on the poor, as in calamitous times it is a comfort to them. Melon, who has discussed this subject better than all others, falters on a syllogism which could have revealed to him the utility of an augmentation, for which fraud is so imperceptible as not to be recognized.

He has reasoned as follows: augmentation of the

error.

money helps debtors and hurts creditors. Now debtors are always the poorer people, so such an augmentation helps the poor. But the fallacy lies in this, that he is rich "who has the means to be able to enjoy the labor of others without currently having to yield an equivalent in work, there having already been taken from him, and converted into money, his earlier labor or that of his ancestors."⁴⁻¹⁹ This is why one with a great deal of money is rich and is a creditor as far as work is concerned. A poor man has no money but is a creditor of it to the rich because of the labor he gives them. Thus, money and labor rest on opposite sides of the balance; the rich are debtors as far as money is concerned; the poor creditors.

Augmenting the money is of help to debtors, not in terms of labor, but in terms of money. Thus, it helps the rich because more labor is required to acquire the same true value in metals (I refer here to an augmentation of the currency prior to a change in the price of labor, following which it is destroyed). It is, therefore, unjust inasmuch as it enriches the wealthy further and increases the burdens of the poor.

When the state is unhappy, the prince, who is its richest person and the greatest debtor, in money, becomes money poor. For this reason, augmentation of the money helps to enable him to remain a creditor of the same work from his ministers, notwithstanding the fact that it no longer satisfies the same debt in merchandise. What benefits the prince, who is the center of the society, must be believed to benefit all, even if the poor should end up worse off, in which case it is not appropriate to complain of it. In fact, the poor get relief from it, not absolutely (as Melon believed) but relatively, because a small part of the new weight is theirs. For, all the saving which the prince makes on his ministers cannot be made by the ministers on others, who quickly increase the price of their labor. Thus, it is necessary for them to tolerate some loss because of the change in the money.²⁻⁴ Those to whom it is given also lose; in this way and, by degrees, the loss is distributed over everyone, until it reaches the peasants, from whom it is passed on to the prince in the next payment of taxes. Because of the circuit of expenditures the prince makes, he is at one extreme and the peasants are at the other. The circuit of the revenue soon goes from peasant to prince. From this it follows that savings on expenditures are, as far as peasants are concerned, less harmful than for others; and, in the same way, they enjoy

the greatest benefits from reductions in excises. Augmentation of the money, taken by itself, causes both of these effects, when it is introduced in situations of poverty. To describe this in terms which have the most natural likeness to what I have been saying: this is like the motion of water at the bottom of a well, when it is struck by a rock that has fallen into its center.

Melon's
second
error.

The other error which Melon falls into is similar to the first. He concludes one of his discourses with the words: *augmentation of the coinage in order to earn the mint fee, is pernicious; but it is necessary for the comfort of the peasants already laden with taxes.*⁴⁻²⁰ Stated in absolute terms, this necessity is false. Moreover, instead of removing the intrinsic value of taxes, it is far better to remove the taxes themselves. Should a king of France who is collecting 200 million lire from his people and who does not wish to burden them with such a weight, alter the coinage so that 200 million lire corresponded to 150 million in old lire, rather than annual 50 million in excises? The desire to hear the same numerical magnitudes even when the thing being counted changes is nothing short of ridiculous vanity. Augmentation of the currency is necessary when, on one hand, it is a force that lightens the weight when, on the other, this obviously cannot be done. Since this case has arisen many times, it would appear to me that it should be known to Melon, who has tried to solve this problem, as difficult and thorny as it is great and serious.

The problem
of Melon
and its
resolution.

He asks *when taxes needed for meeting the state's responsibilities have become such that those who owe them have absolutely no means of paying them -- absolutely, that is, as the discipline of a military exercise -- what then should the legislator do?*⁴⁻²¹ None of those believed to be able to reply to Melon has approached any resolution of a question which, though raised many times, has, in practice, never been resolved with anything like firm and considered reason, so small a part does wisdom play in great disasters and other disturbances.

I believe that the following is the solution to this problem. What is not attainable should never be sought after; to demand it with violence provides no way of acquiring even the little that could otherwise be obtained. The necessary expense of acquiring it provides an obstacle to doing this. That expense must be provided either by the use of revenue raised by taxation in future years, which consists of state's

notes, shares, and what we call public debts;⁴⁻²² or by reducing expenditures, and this is what the augmentation of the coinage is.⁴⁻²³ If the problem appears to have run its full course the augmentation is better; and, in addition, by the time any harm from it returns to the prince, all is already quiet. On the other hand, if, so to speak, the waves are still agitated without hope of becoming quiet soon, other counsel is better advice. If both are not enough there is bondage which (as was shown by Sagunto, Carthage, and Jerusalem) is better than a desperate and hopeless defense which was regarded as glorious only by orators -- and that was only because their surroundings caused them to confuse heroism with madness. Augmentation of the currency is necessary, therefore, whenever it is desirable to reduce expenditures. But because of the needs of war, this cannot be done too obviously, lest it discourage the militia and the magistrates whose wages it would reduce.

Finally, the diminution of wealth and of pecuniary income is also an evil of the augmentation of the coinage, but only a minor one (as I shall show in Book V) and sometimes even a benefit.

TRUE UTILITY OF AN AUGMENTATION OF THE MONEY

Three great uses of the augmentation of the currency.

Everything intrinsically desirable in augmenting the money which has been discussed at such length, and with such a variety of opinions, was known by the wise Romans, and even in barbarian times.²⁻⁵ Pliny, a most serious author, has expressed it in just two lines. He says:⁴⁻²⁴

Librae autem pondus aeris imminutum bello Punico primo, cum impensis respublica non sufficeret; constitutumque, ut asses sextantario pondere ferir en tur. Ita quinque partes factae lucri, dissolutumque aes alie num.

These, then, are the three great uses: to relieve serious needs, to save on expenses, and to settle debts.

First use: to provide for needs.

Clear proof of the first utility is the fact that none of the many who disapprove of the augmentation of the coinage has ever been able to propose a better solution. Public debts, which we refer to as *arrendamenti* are much worse if the state is already impoverished, as I shall show in Book V. The creation of state notes is

not as bad as the creation of public debt. This will be taken up in Book IV. Here, I will say only that whoever has upbraided augmentation has complained even more bitterly against the creation of notes. Consequently, since anything which is no close alternative is ever bad, augmenting the currency is good for satisfying public necessities.

The second use: to reduce expenditures.

The utility of such an augmentation grows even more, because such an increase is useful, not because of an augmentation of taxes but because of a diminution of expenditures. And, although the rule which should always be before the eyes of the prince is that *parcimoniam magnum est vectigal*,⁴⁻²⁵ in the same way, the best means are those which, on the one hand, reduce the burden of taxes, thus, facilitating their payment and increasing the total amount collected, and on the other hand, causes expenditures which are not only very high in war time, but which, with extra prodigality, are, for the most part, made to contract. From the economy of the prince follows that of wealthier and richer persons around him, who not only have smaller salaries, but who also receive smaller payments from their debtors and tenants. A poor man is, thus, doubly relieved. He is relieved from royal taxes, on one hand, and from crueler private exactions, on the other. Though this might seem unjust, it is not. Because a private injustice which is accompanied by even greater public benefits ceases to be unjust and becomes necessary and right.

The third use: the payment of debt.

Thus, the third benefit -- the payment of debts -- is no less important with respect to state debt than it is for private debt. With regard to the first, it is eminently true that nothing is more harmful than repudiation of the payment of debt by the prince. Because as his payments are suspended, those of his creditors likewise are suspended. As a result, all the wheels of the clock stop turning. Their debts turn on those of the prince and this is how the state's notes unexpectedly came into being. From which the following rule follows: the prince must either fail quite obviously, or he must give the appearance of payment in full, even when he pays royal expenses less. Although, it is wrong that the state's ministers and those who sacrifice themselves for it should be poorly paid, they must also be consoled by being reminded that they are the richest men in the state and that, the longer the state's difficulties last, the more will they be enriched.

The faulty reasoning of

It is understood from this how false the assumption of the abbé de St. Pierre is and how frivolous

the abbé de
St. Pierre.

its demonstration. He wishes to prove that the augmentation of all the coinage is a most unjust, disproportionate, and heavy tribute. He demonstrates this by saying:

that in such an augmentation those who have a perpetual annuity and a fixed money income lose a great part of it. Less loss is suffered by one who has leased property, because as the term of the lease expires, its conditions can be changed. Those to whom it is leased feel nothing. Indeed, they gain from it by selling at a higher price!

He concluded by asking can one imagine a worse subsidy than one which is paid for by only a third of the subjects, some for five or six years, some forever?⁴⁻²⁶ If the many other works should not bring to such great men²⁻⁶ the esteem which they deserve, then this reasoning would show us that they do not know which tributes are unjust. If the citizens of a city wish to build walls around it, would it be just or unjust to exempt from the work virgins, children, the aged, and the infirm, leaving only a third to bear the entire burden? Is an excise just if it does not fall on all equally, falling only on the shoulders of the strongest? Annuities and fixed incomes are held by old gentlemen, the richest cities, and opulent churches and monasteries; they are not paid to the peasants for long leases. Those who are able to grant leases are not only those who are comfortable, but also the lazy and the slothful. They are the more deserving of paying, the more they consume without increasing the wealth of the state, not only their own share but that of foreigners as well. Nor is it necessary to beseech us for help and to intimidate us with tender sounding words like orphans, widows, virgins, or wards; for there are far too few of these. The true orphan, the true indigent, is the industrious peasant, the artisan, the seaman, and the merchant. We should have compassion for these. These are the ones who customarily take out leases, and who would gain from an augmentation of the coinage.

Causes of
his error.

Thus a man of great genius and sagacity has fallen into error, as he has dealt with the complaints and misery of the France of his day, and of the impetuous wish he always had to place at the end of his discussions, those venerable words: *Quod erat demonstrandum.*⁴⁻²⁷ Words which having been consecrated to the truth by mathematicians, should be forbidden from use

by other, still undeveloped and unknown sciences, which would take advantage of and profane them.

Why it is
appropriate
to favor
debtors.

As for debts between private individuals, I confess, to begin with, that it is proper not to diminish them. At the same time, it is necessary to know that the greatest evil of war is not the impoverishment of the people, but the distortion of the distribution of money and its concentration in the hands of just a few. This is a very serious evil which I shall discuss in the next book. Ancient Rome was afflicted with this evil, resulting from a disequilibrium in the constitution of government, which caused the liberation of debtors who seemed so unjust but were not. Because, for persons suffering from indigestion or overeating, violent purges of one sort or another are needed to cure the defects of a poor nature. It is no less defective for a principality to be full of lawsuits between creditors and debtors, involving large sums which they do not possess. Disputes multiply ideal wealth but reduce real wealth. For a thousand ducats lent by one and not paid by another, look like two thousand. Each boasts of having them, the person who expects them shortly no less than the person who, without assurance -- has them. What is more, while they are vying among each other, they waste time and labor which both could have used in trading and truly enriching themselves. For this reason, it is worth the care of a prince to neutralize anyone who expects greater riches than those which actually exist, who realizing he is poor, will turn to work. Or, more briefly: the extinction of debts and idle pretensions, however accomplished, is a great benefit to a state.

How neces-
sary it is
for a prince
not to have
any debts.

Similarly, the sovereign must extinguish his own debt as quickly as possible. Whoever is left poor as a result of this, at least gains by knowing it in time to have some time which can be used productively. But it is necessary to ask oneself, in clear language, whether or not he has failed. It is this doubt which, as I have promised above, I should like to examine.

Whether it
is ever
appropriate
for the
prince to
declare him-
self bank-
rupt.

Bankruptcy is, without any question, superior to new excises. It is easier and more expedient. Nor does it yield ground which some artful planner,²⁻⁷ like John Law in France extends in its recovery. But bankruptcy is too sudden and strikes too impetuously. Worse still, it strikes the people around the prince, the most powerful people, from whom tumult and rebellion is to be feared; it slashes his faith with hideous scars, thus weakening it.

Augmentation of the currency has the same effect

as bankruptcy, but the harm from it is slower to come and is distributed over everyone as it falls. As a result it is less biting and clamorous and, what is more, inherently implies a reduction of expenditures.

There are three ways of bringing about an augmentation of the money.

The first method is a poor one.

The second method is one which was used in France.

The third method can

I am aware that the present chapter has already become over long, but I do not believe I am responsible for this. Nor does it seem possible for me to end it without first mentioning some means by which an augmentation can be accomplished profitably, and before considering which of these means is best. The means are three in number: namely, the markings, new coinage, and the simple edict on the prices of coins.

The first means is one which was used in ancient times. Many ancient coins are found with some stamp in their center; this expresses a change in their value.²⁻⁸ But since such markings are easily imitated, and since the profit made from such alterations is divided between the mint and private individuals, this method has, with good reason, gone into disuse.

Another method has become customary in France in the present century, and it would be excellent, except that a great deal is lost in the cost of new coinage and on coins which are worn by the time they are recalled. Profit from augmenting the money is reduced because of the necessity of having to replace the metal in these coins, which have worn out. Besides, trade is interrupted for some time and is slowed down by disturbance of the alteration, so that everything seems upset and confused.

The abbé de St. Pierre adds to these inconveniences the profit which foreigners make in minting similar coins. Then such a profit is doubled in evaluating the harm done to them inasmuch as this is done by the enemies of the state. These are like scarecrows used to frighten infants. In our kingdom, 5 millions in coins were minted and then raised by thirty per cent. Not even one *carlino* was minted outside. The same thing was true of France. This could not be otherwise because, given the fact that foreigners could mint them too, how would they be able to make their coins flow into the market in which they were raised? They would not send them as gifts, nor to buy goods in a ruined country, which does not even have enough goods for itself. Nor can they exchange the old coins, when the prince withdraws, melts, and remints them. Then how are they to come? Obviously, such a fear is in vain.

The third way -- to augment the money by proclamation -- is the best way, but there is little gain in

be used in few principalities.

Origin of the abhorrence which the public has for alteration of the coinage.

The form of government in barbarian times.

it for the prince who finds himself without money. Only in our kingdom, in which a great deal of money is deposited in banks, could the prince make all the gain from them his own, a gain which falls to him because of the lack of expense of minting all the money. But in other states the banks do not contain so much wealth because, either they have no banks, or they do not have any wealth but faith and security, as in the case of the Bank of Holland. It is for this reason that the two means mentioned must be used.

What I have already said all runs counter to the torrent of popular opinion, which has had so much success carrying even the more judicious and wise along with it that I have no reason to expect that I can oppose them successfully enough to have gained many followers. From which, though it would appear I should be grieved, I am instead joyful and happy. I know how easy it is to propose some troublesome augmentation of money, which is accomplished by feigning need and necessity, whether these are very minor or just plain false. And, surely, he who searches for the origin of common opinions, would find that -- like all other opinions of the multitudes -- they are not false, except insofar as they are general consequences drawn from particular inductions. But, the facts from which they derive, would all be found to be suitable for forming it. And this is the origin of the hatred against augmentation of the currency.

Ancient peoples, about whom something is known to us, were not hurt by alterations of money until they came under the power of barbarians from the north. The form of government which they established wherever they went, was the despotic-aristocracy, a form of government to which few authors have been exposed and which, as a consequence, few write about. It was necessarily born from the union of two nations, the conquered and the conqueror. The older inhabitants became slaves of the barbarians but, because they had first lived among themselves aristocratically, they wished to continue to live in this manner. Consequently, they formed a senate among themselves which they called a parliament, choosing one which gave nothing of royalty but its name, its banners, and their natural submission to it. Thus, the king had neither soldiers, nor income, nor ministers of his own but only his inheritance. They were required, with force, to make use of electors who, all being despotic and on their own lands, had soldiers, taxes, and wealth. The same kind of government still exists in parts of Ger-

*Causes of
the abuses
of the mint
made by the
sovereign.*

many and Poland, but not anywhere else to the same degree as in centuries past.

From such arrangements, it developed that kings and emperors had very little power of their own and, as a result, were given the mint as a sign of sovereignty. They began soon to turn their arts and studies to it, simply for the satisfaction of their own unjust greed. Thus, the best source of income and profit which the kings ever had was made from an institution created for the public welfare, and it all became theirs. Hence, they began to be conceded as a royal income equal to duties, and tolls began to be allowed. This is when it became annexed to sovereignty or to that power which it had obtained directly from the sovereign. So much did princes abuse the mint power, because of their so poorly controlled greed, that the parliament, still replete with power and authority, sometimes prohibited them from altering the money. Only with a proper oath was it permitted. And their people, who were almost freed from the most grievous evils, recognized their good will. The horror could have been eliminated from the popular mind in France's ultimate necessity, if the salutary operation of augmentation of the currency had not been mixed in and confused with others which were not so laudable.

This is why there is a continuation of fear and abhorrence for that which, being bad and ugly in itself, sometimes on a par with cruel and bloody wars, is nonetheless sometimes necessary and good. But I fear so much that the coinage will be tampered with, without any necessity, that, if I were not perfectly aware of the times and of our prince -- under whom heaven has given me the sort of life in which I either would not have written the truth or I would have abstained from writing anything at all. His virtue completely assures me, meanwhile, that the prince will not lay hands upon the coinage without some extreme and, I dare say, almost desperate necessity. Meanwhile his grand and deserved good fortune assures me that, as long as he lives, we will never come to such a state.

CHAPTER 4

CONSIDERATION OF SOME EVENTS WHICH OCCURRED IN FRANCE, IN 1718, AS A RESULT OF A NEW COINAGE OF THE MONEY, AND THE AUGMENTATION OF ITS VALUE.

A great deal that can be said about augmenting the currency occurred in France during the minority of Louis, the fifteenth. Since it was debated with the utmost vigor between the Parliament and the Royal Court and was followed by the most serious consequences, I think it would be useful to undertake an examination, once again, of the proposals of one and the replies of the other. This is all the more useful because the example of such a powerful and ingenious nation will be more instructive than any formal teachings.

*The state
of France
in 1718.*

In 1718, France was oppressed by evils which the last war had brought her. Although none of their causes remained, the evils -- which had not been eliminated -- still remained and became even more and more cruel. Philip of Orleans, regent and uncle of the king, a man of great courage, was no less saddened by the evils than he was certain of their remedy. The persecution of financiers had, in a certain respect, vindicated and satisfied the popular rage. But it had, nevertheless, failed to place the finances in order. The accounts which Desmarests, the *Controleur General*, had been asked to give and which he had justified completely, had enabled him to discover the almost incurable calamity. By 1708, total debts amounted to almost 600 million *lira*,^{4-1,2-1} and they had increased even more in the next decade. These debts were expressed in paper which was allowed to be traded freely. But their total had become very large and the recognition of the impotence of the Royal Treasury to pay so vast a sum, had taken away its credit. As a result, trade was in great difficulty, and the miserable popu-

lace was bled white by greedy usurers who were called *agioteurs*. In order to abolish such notes,⁴⁻² their number was greatly reduced. But even after this was done a quantity equal to more than 200 million *lire*, and the interest on them for many years, still remained.

An augmentation is proposed.

D'Argenson, Custodian of the Great Seal, proposed to the duke that an augmentation of all gold and silver coins be accomplished, by reminting the gold coins and raising their value by almost a third. Thus, under a different guise and with a longer circulation, non-payment of the rest of the notes and their destruction would be accomplished. In the end, as all wise men had predicted -- and as was inevitable -- the court would accomplish a general bankruptcy.

Parliament opposes it.

Parliament deliberated and then resolved against such new counsel, moved more by private indignation and the prudent applause of popular approval than from mature considerations of public necessity. And on May 18, 1718, it presented itself to lodge some protests to the sovereign. From these, I have translated⁴⁻³ a complaint of the responsible jurisdiction of Parliament and of other popular complaints to that government; and I shall undertake an examination of only what pertains to this subject. The complaint said:

Parliament's first reason against augmentation is examined.

Permit me, Sir, (speaking to the duke-regent), to represent to you, that while the edict makes the appearance of wishing to extinguish the notes by paying them off, the loss is all absorbed by the person who brings his money to the mint. Here is an example of it. An individual brings 125 silver *marchi* to the mint. At 40 to the *marco*, these are worth 5000 *lire*; he also brings 2000 *lire* in state notes. He then takes out 7000 *lire* in new money, which does not weigh more than the equivalent of 116 *marchi*. Hence, on the original 125 *marchi* he loses all his notes plus 9 *marchi*. Since the law is general, those who have no notes suffer a loss just as much as those who do, for as long as the payment of notes is a privileged debt of the state -- especially after so many reductions have been made in them -- it is a debt which can only be satisfied by the king.

What Parliament shows is true. But since it could not be known to the great mind of the duke, it was im-

prudent to disclose it to the people, to whom it would have been expedient not to make it clearly understood. Indeed, what could the Parliament have deduced from it? That the duke of Orleans had wanted to find the art of making gold in his chemical studies? If, as Parliament knew, the royal rents were not enough to pay off so much debt, what other advice was there to give, except not to pay it off? And how could this have been done without any loss to creditors? Parliament did not want new duties, which it would have been harmful to levy on poor subjects, simply to pay off rich subjects and more than a few foreigners. Consequently, had the currency been augmented, it would have represented a completely fictitious payment so well carried out that the harm would have fallen on everyone and only a small part of it would have fallen on each person. Indeed, to show that the augmentation would have fallen on all, would have been to call it something valuable and not a burden. To wish the king alone to pay off the notes is to state a great impertinence. Without the authority to levy duties which the Parliament wished him to have, the king would have been the poorest man in all of France, if he did not begin to sell his most precious private pieces. As for the notes, as long as they were regarded as a privileged debt, some of the residue of their life and motion would be allowed to continue. Since the royal faith and promise is their very soul, to have taken that away would have caused them to fall away, completely dead.

The second reason is examined.

The Parliament continues.

There is clear proof that all the subjects of the king are suffering harm. It can be affirmed, without exception, that the expenditures of every private individual will rise by a quarter, without any increase in consumption; and income will fall by a third. Meanwhile, because of the difference between the value given the coins by the new proclamation and their intrinsic value, all trade (particularly foreign trade) will suffer immeasurable loss.

This, in part, is also true since expenses would certainly rise, though not all incomes. It is false, however, that both these losses go together since separately the income of many would fall and, for many others, expenses would rise. But from all this, nothing but a most desirable general economy and saving

would have occurred. It is, therefore, false that foreign trade would have suffered from it, inasmuch as the alteration of foreign exchange would have rendered the augmentation insensible to foreigners.²⁻² For, the emergence and bane of a forced economy, this was not a problem in 1718, but eighteen years sooner. The fashion among monarchies is war and it is not possible to be spared their effects when peace returns without reducing everyone to a modest and frugal life. If the French would be hurt by the augmentation, they deserved to make excuses, but for other reasons. The shrieks and howls of the ill are heard when they are treated, rather than when intemperate living brings on their illness. Similarly, wars are filled with merry songs, with feasts and general joyfulness; alterations of money are sad and mournful. It must be deduced from this that the former are the disorders and diseases, the latter the cures.

Parliament's conclusion examined.

The discourse was concluded with the following words: "As for foreigners, if we take from them one silver *marca*, equal to 25 *libbre*, old weight, we must give them 60. Whoever pays us, on the other hand, pays us in our coin, and this will cost him only its intrinsic value." This was an entirely false concern. It is true that the foreigner would pay in new money. But, since the same parliament predicted that everything would be increased in price, that is, paid with a greater number of *lire*, foreigners -- forced to yield to prices which they would now find higher -- would pay more for goods, albeit, with coins which were of a lighter weight. Consequently, what would be saved in weight, would be lost in numbers; and hence, nothing would be gained.

The fear which they demonstrated at the end of the discussion and which arose from the introduction of coins minted abroad, has a poor foundation. This is because where there is no disproportion between metals, no profit can be made on the coinage. And if what was feared had been found to be possible, then France -- now virtually without any money at all -- should have been pleased. Parliament, therefore, feared an impossible though very great benefit, and it feared it as an immediate and serious evil. Nor did anyone believe that it deserved to be adduced as an excuse, simply because Parliament mulled over it for just a single night for the same thing would have remained even after a longer examination. Indeed this is all that could result from the sort of superficial consideration that most men would make.²⁻³

Narration of the contrasts between Parliament and the Court.

To continue the history, the king did not reply to the Parliament except to say that the edict and its implementation could no longer be either suspended or revoked. Taking heart, Parliament, on its own authority, revoked and, then, annulled the edict in the most seditious terms. It was poor advice which proved fatal to France. The Council of State quickly annulled the arrest of the Parliament on June 29, and took no other action, even going so far as to listen quietly, in the most respectful terms, to the new objections which had been made by the First President. The Keeper of the Seal replied to this, as well as to the first, on July 2, with words worthy of the knowledge and high mindedness of a ruler, saying:

Reply of the Court to the preceding discussion.

That the king, being persuaded that he had to pay the debts of the state from revenue of the same state in defense of which they were contracted, believes that all the laws of his reign shall compete in satisfying him. Nor, in view of his dignity, birth, or privileges will he seek an outlet unworthy of his zeal and fidelity.

The private difficulties of creditors are compensated for out of the public welfare and from the more facile and ready liberation of debtors. And as lands, which are the true wealth of a state, become better than obligatory notes, they will increase in income and price.

Exactions of impositions on the poor will be easier, and as a result, less serious for them and more plentiful for their king. June's income has already caused them to believe it.²⁻⁴

This consummately prudent reply reveals the falsity of the opposition in just a few words. New and poorly understood complaints followed it, concluding with the great and memorable *lit de justice*, of August 26, by which Parliament was dejected and humiliated, with a fall from which it has never been restored.

But before such events could take place, on June 30, in order not to seem inferior, the *Camera de'Conti, e dell' Ajuto*²⁻⁵ made their complaints.

Complaints

The *Camera de'Conti* had revealed, by way of Presi-

of the
Camera de'
Conti exam-
ined.²⁻⁶

dent Paris:

that the augmentation was making trade impossible, exchange enormous, foreign merchandise double in price, and was causing French coins to remain among foreigners in great abundance. The ease of counterfeiting them and the allure of immense profits potentially filled France with adulterated coins. Even domestic trade was harmed by the augmentation and this, in turn, reduced consumption.

All of this was false, indeed, viscious.

Trade could not have become impossible because it was between two subjects who were equally hurt by the harms which followed, and which, according to them, followed in the wake of the adulteration of the money. When the seller is as much in need as the buyer, prices are always moderate. Exchange rates do not become great, except nominally, and this is not important. If exchange between Rome and Naples, for example, should go to one to one thousand, when the ducat is a one-thousandth part of a *scudo*, exchange would still be at par. If foreign goods should become higher in price, a smaller quantity of them would be sold and, consequently, less money would go abroad.²⁻⁷ Moreover, if native consumption should fall, more goods would remain for export. Counterfeiting was bad enough to be feared at all times, but there was no reason whatever for fearing it any more now than at other times, like something which has no connection with the augmentation. In fact it was found that no neighboring state sent coins into France.

Complaints
of the
Camera dell'
Ajuto.²⁻⁸

On behalf of the Camera dell'Ajuto,²⁻⁹ President Lecamus then spoke with greater eloquence, though not with greater wisdom, saying:

That to raise the prices of things is a great evil which was already beginning to be felt; that with scarcity, the people were already depriving themselves of the comforts of life; that because of reduced sales, manufactures would begin to fall and artisans would begin to leave the realm; that with consumption reduced, even the king's taxes would fall; that if former kings had behaved this way it would only

have been in times of serious wars and extreme need; that they would never have made such a great augmentation; and that, in any case, they would always have promised and seen to it that it was revoked with the return of peace. This, in the midst of a profound peace, as it was, and following the weariness of a cruel, vicious, and perilous war -- was a cruel and bitter blow.

Reply which
was deserved
by the pre-
ceding dis-
cussion.

I believe that such a discussion, to which the duke of Orleans made no reply, could have been answered by him in these terms: We know that people remain deprived of many comforts, and it pains us. But we have not even incurred a debt of one lira on a debt of so many millions. It is urgently necessary to eliminate all of it, at any cost, and to free the state of so many discredited notes. We believe that the sale will be smaller, but we hope that more goods will have to be exported, and that merchandise and not artisans will leave the country, and return to France the money which wars have drained out. If taxes fall because of reduced consumption, duties will rise because of the greater volume of exports. If our predecessors have augmented the money at all, it is a sign that this can be done without always regretting it. If they did this in the midst of serious wars, we will do so at the end of a war which is greater than any other France has ever had. We have awaited peace so much because Louis, the fourteenth, did not have the heart, in his declining years, to cure such serious wounds, and because convalescence and the passage of an appropriate time period are needed when one takes a strong medicine. With so many hundreds of millions in bad money,²⁻¹⁰ the idea of restoring and enjoying peace is madness. The desire to be assured that the augmentation which has been done shall be undone is a pernicious wish for an already manifestly bad thing.

How did the
errors of
the Parlia-
ment and the
Court arise?

All of the objections stated above arose out of the ignorance of this verity: namely, that the wish to exclude a plausible remedy for a painful injury requires the substitution of a better remedy. When the public is suffering from a given condition, new councils are always followed in the hope of improving its condition. This is why failure to heed Parliament was not fatal to France, according to one writer,¹ though

¹The writer is the author of a biography of the duke d'Orléans, from

it was fatal to have thought of opposing it. Such a thought resulted in the instantaneous loss of all the authority and esteem which it had gained by favoring opinions which, for so long, were popular and less compromising. Nor did Parliament remember to remind itself of the military power and money it controlled, when it should have, and that if one is not struck down, the other will unfailingly be exhausted. Likewise for others, who shook an armour that is less powerful than feared against a perfectly compact body, an armour which once cracked could not be used again.

What will follow an already accomplished augmentation.

Thus, the augmentation took place. But the result yielded no rule because it was interrupted by the banking system and by the Mississippi Company. Only the fame of the duke of Orleans was stained by it. No slander or atrocious injury against it remained, and none was devised, proffered, or believed. This was a great lesson in the injustice of human judgments. Louis, the fourteenth, had acquired the name "Great" when all the quills and eulogies of eloquence had come to a halt — and he had surely earned it. Philip, of Orleans, who, without doubt, found France moribund and left her in good health, died in disgrace, instead of with the glorious name he deserved. And even this is not strange. Men have always been known to curse their surgeons rather than their friends, if I may be permitted a frivolous expression in the midst of so much gravity.

which virtually all these events are related at length.

BOOK IV

THE CIRCULATION OF MONEY

INTRODUCTION

To demonstrate the disutility⁴⁻¹ of gold and silver, and to show them with a contempt which is on a par with the excessive esteem in which they are held but which they surely do not deserve, poets have invented the fable of King Midas. They assert that he petitioned Jupiter to convert anything he saw and touched into gold. According to the fable, once this wish was granted, King Midas died, in misery, of privation and hunger. The poets are, of course, jesting; they scoff at money, which is ridiculed as something made of a useless and fancifully prized substance. They compare themselves to wealthy men for whom they care little and to whom they think themselves superior.

If the poets had really wished to understand how fundamental such a consequence is, their fable could have continued in this manner. When Midas became aware of his error, tasting the cruelest kind of hunger in the midst of what he believed to be riches, he begged Jupiter anew to convert everything he touched into bread. But once this was done, he had to dress in bread, to sleep, sit, and feed himself on bread alone. Unable to satisfy his thirst, he died in a rage.

Anyone who might have been asked to draw a conclusion from this part of the fable would immediately have seen the falsity of the first conclusion. The metals are not useless any more than bread is. The only truth to be found in this is that nothing has ever been created on earth which is naturally sufficient for all needs. In the state of commerce, money alone is enough, but even this is not caused by money itself, but rather by man. If man should join with others for the love of his fellows, for the benefit of all, then -- even without money -- nothing would be needed by him. In other words, the proper conclusion is that the wealth which could have satisfied

Midas was the love of mankind. That alone was worthy of his petitions.

Because errors made by poets are always infectious, today everyone relates and applauds the tale of King Midas. This would be pardonable if these same men were not seen to become exultant whenever they noticed the entry of money into a country, and were saddened whenever it left, no longer mindful of how much they had already condemned it. For this reason, it will be useful for me to demonstrate here that the conservation of society is the only good. Some sufficient quantity of money should be procured and maintained, because it conduces to the benefit of society. To increase it would always be harmful, and it must even be patiently allowed to leave a country when this is good for the health and comfort of its owners. Finally, to come to the principle: love not a great deal of money as such, but its quick movement, well regulated and distributed.

CHAPTER 1

THE CIRCULATION OF MONEY.

When the circulation of money can be regarded as useful and true.

I think of the circulation⁴⁻² of money as the movement which money makes from hand to hand, as the price of work or labor. It produces for those who give it up the acquisition or the consumption of some commodity. For this reason, when it is transferred in some other manner it makes a useless circuit, which I do not intend to discuss here. For example, if the prince should earmark a thousand ducats for transport each morning, from the home of one of his subjects to that of another, such a circuit would neither help the state nor increase its power or happiness, but would only inconvenience its citizens. The circulation of money, then, is an effect not a cause of wealth. If one does not presuppose the existence of many useful goods which can be traded, money could do nothing but make a vain and fruitless circuit.⁴⁻³ For this reason, laws which are useful for the multiplication of vendable goods are beneficial; all others are bad and harmful. For example, 100 persons might remain in a closed room with a certain sum of money with which to gamble. Following a long game, the money, along with the riches and poverty of the players, will surely have experienced innumerable changes of hands. But the total would have experienced neither growth nor contraction, nor can wealth be said to have varied in such a situation. True, a lack of circulation impedes the progress of various industries and, thus, generates poverty, just as rapid circulation stimulates industry. But one who observes carefully will note that the circulation of money can increase and stabilize the wealth which is already in a state, but it cannot generate wealth that has never existed there. Thus, it is always true that one should first think of creating goods and only then of putting them into circulation. In this manner, as soon as some goods are sold and consumed, they quick-

ly give place to others which succeed them. It is true, moreover, that rapid circulation gives the appearance of an unreal wealth, as when the nobility lives in a style and at an expenditure greater than its income, and fails to pay off the debts which it incurs. In such a case, the nobility cannot be persuaded that it is impoverished. Likewise, a tradesman who counts his credits as certain wealth and regards himself as wealthy and who increases his expenditures on the basis of expected income, will also, as in the case of the noblemen, eventually go down, disenchanted, in poverty. Therefore, a fantasy full of the mere shadows of wealth constitutes poverty quite as much as when one believes he has riches but actually does not.

Most reprehensible, therefore, are those writers who have allowed themselves to be deceived by the language of the common populace, who have confused effects with causes, and who have rashly proposed to their prince that he increase the quantity of money and its circulation, completely ignoring agriculture and population from which useful and true circulation uniquely are derived. The quantity of money should only be increased when there is not enough money to move all trade smoothly without allowing some portion of it to dry up. I shall turn now to a discussion of how such knowledge may be acquired.

Wishing to demonstrate how much harm would be brought upon England by a reduction of interest,⁴⁻⁴ because of the decline in the quantity of money necessary for circulation which might follow from it -- John Locke¹ attempted to determine how much money was actually required to satisfy the needs of England, and to show that it was being provided poorly.⁴⁻⁵ True, he does not perform any precise computation, contenting himself with an exposure, almost in passing, of the truth he seeks. He divides the entire population into four classes. The first consists of laborers, which we call *bracciali*,⁴⁻⁶ composed of peasants and all the least skilled artisans. Another is the tenants of the land, and the master artisans, that is to say, those who direct and pay those in the first group, and who promote and direct them, and gather the fruits of their labors, to make up a body of trade which is concerned with selling to the merchants and shopkeepers,

Calculation of the quantity of money necessary for a kingdom, according to Locke.

¹In the treatise concerning the reduction of interest from six to four per cent.⁴⁻²¹

who make up the third group. These, which in English are called *Brokers*,^{4-7,2-1} are those who are not involved in the cultivation of the soil or in any of the arts, but who gather up the manufactures and provisions with the help of money, which is their unique capital and then -- transporting, storing, assembling, or dividing them -- sell them to consumers at higher prices, for a gain. The fourth group consists of those who consume the goods which have passed through the hands of the other three classes.

The first class does not expect to retain a great deal of money, living from hand to mouth. Since they are paid every Saturday, it is certain that they never have more money on hand than the price of a week's work, that is, a fifty-second part of their annual earnings.

Tenants, on the other hand, cannot have less than one quarter of the rent, either on hand or in the hands of their principals, in non-circulating money,⁴⁻⁸ since lease holdings in England are paid for in two equal parts, one in March, on Annunciation Day, and the other in September, on St. Michael's.

No exact estimate can be given for merchants because there are differences between the velocity with which large merchants, on one hand, and small shopkeepers, on the other, turn over their money. Yet, it provides each with a twentieth part of annual profit, in cash, which always remains in their hands.

One cannot make any calculations concerning consumers, who comprise the greatest number, because it is impossible to do so without error. Moreover, no conclusion arrived at here is too certain because there are many who comprise more than one class under this heading, consumers being joined together with landlords and merchants. As for women, ecclesiastics, ministers and infinitely many other groups, no calculation beyond these outlines can be made, any more than it could be for public excises and the circulation of money. But the reflections of John Locke, on the state of the England of that period, are useful and most judicious, and I shall discuss these later.

How much money there is in the kingdom of Naples.

In the meantime, I wish to show the manner by which we can know when the kingdom has enough money and when it does not. We will examine the case of Naples for this purpose. We can have confidence in this case because of the great information that is available there, since there are a little less than 1.5 million ducats in copper coins¹⁻²⁴ there, almost 6 million in silver, and, at most, 10 million in gold, inclusive of money in banks, which does not exceed 3 million ducats.

Examination of whether this is enough for her trade.

This money must serve for the trade of all the goods which are consumed there. Thus, it is now necessary to attempt to determine what sum these goods come to, in order to determine whether they can be moved by just 18 million ducats. Petty, the English gentleman, has calculated virtually the same thing, almost exactly; while another writer of the same country, who a short time ago wished to show that the debts of the state were not as great as they seemed, has found the total value in England most ingeniously, even if the methods used were somewhat lengthy. Indeed, I would not risk following his method even though I know that his conclusions are true, for as value in that nation overflows with rashness, thought often comes away from truth in its vigorousness, keeping the complex and unfamiliar at bay. This method seems abbreviated to me and while it is not able to lead to exact truth -- which would be difficult in any event, except within certain limits -- it is sufficient for drawing the conclusions which are important to me.

Calculation of the value of the yield for the entire kingdom.

First, it is certain that total consumption in our realm is equal to the total of its products.²⁻² For just as a large number of commodities consumed by us come from abroad, many of our native products are exported. Thus, without attempting to determine how much these come to, it is certain, from their effects, that the two values are equal, since the realm is neither excessively enriched nor excessively impoverished by them; from which effects, either one or the other is inevitable when there is a great disequilibrium between entry and issue. It, therefore, suffices for us to know how much we consume in a year.

No matter how poor he may be, a man in this kingdom cannot live on less than twenty carlini a month, converting to their money prices the rent of the house in which he lives plus everything he saves by providing himself with food, clothing and everything else he can procure without the intervention of money, that is, the small output peasants produce of such things as hens, eggs, game, wood, provisions, fresh fruit, and other things. It is clear that I underestimate here. A person cannot live on less than six ducats in Naples. Whoever lives on less, has either his food, his clothing, or his shelter paid for by others. It is common knowledge that many spend as much as fifteen, even twenty ducats a month for themselves alone, and some consume fifty or sixty in order to live. Nor does this seem to be too little, because great gentlemen spend even more simply to support those who serve them, and

I have just included this in the expenditure of these gentlemen. I do not speak here of public excises, because these are all included in the expenditure of those who live on wages and merchandise from the sovereign. Inasmuch as there are more poor than rich people, seven or, at most, eight ducats per man, per month would be a compromise.⁴⁻⁹ Since women live on less than men, and children consume little and are surely a fourth part of the human race; and since I speak here of expenditure which consumption gives rise to and not that which enriches another, such as gambling, gifts, and wages -- I believe I can fix the expenditure at four ducats a month, on the average.⁴⁻¹⁰ Or to put it better, what each man consumes is worth four ducats, inclusive of everything. The kingdom has little more than 3 million inhabitants. Hence, the value of the goods consumed is 12 million ducats per month, or 144 million annually.

Consequences of these calculations.

As to the estimates, in order not to mistake their consequences, it is necessary to see that any error made is just opposite what one would want the estimate to be. I would suppose that I have erred by estimating the figure by half the true figure -- that the fruits and labors used in the kingdom in one year, in other words, are 288 millions. It could even be shown that 18 millions, in money, will be enough for us. First, we must deduct the total value of consumption which the cultivator produces for himself, inasmuch as no money is needed for that part of the consumption. In other words, whoever lives in his own home, which is the case in almost the entire kingdom, except for Naples; whoever eats his own grain, drinks his own wine, and so on for every other thing, has no need for money. Since this applies principally to the poor, its magnitude can be considered by each one for himself. Second, all trade done directly in goods, must be deleted. For example, almost all workers are given grain, wine, salt, and lard as wages. The landlord has never actually purchased them. All exchange and barter done and regulated on the basis of verbal future prices⁴⁻¹¹ must be deducted. Finally, in view of the fact that peasants, who comprise three-fourths of our population, use money for scarcely a tenth part of the value of their consumption, I must confess that my estimates are very far below the actual figure, and that I have been satisfied to say that only half the fruits of the kingdom should be deducted as consumed without the use of money. One hundred forty-four million, which is eight times eighteen million, remains. On the average then, it is

sufficient for the money to pass through eight different hands in one year as payment needed to turn over so much trade.⁴⁻¹² Such a movement does not appear to me to be fast enough to be regarded as impossible or even difficult. Consequently, I am persuaded that our money is sufficient. To increase it would not only be useless but would actually be harmful; those who urge us to accumulate and use more of it advise us poorly, as I will show in the next chapter.

Harmful effects of a poor and retarded circulation.

The harm to agriculture and to the arts.

To avoid so many harmful effects, it should not only circulate better but must also be distributed better and more equally in all its channels. I will turn next to a discussion of this matter, and this will be followed by a discussion of appropriate remedies to be applied in such cases.

I. Poor circulation ruins agriculture and the arts. In the body politic, as in the human body, large veins serve for nothing but to carry blood to final or smaller veins. This is how new flesh and, sometimes, new limbs are generated and how nutrition for the whole engine is provided. When the blood is drained, auxiliary veins, those which are most useful, become desiccated; remaining blood collects in greater cavities in the body, where no nourishment can reach it. In the same way, a scarcity of money forces farm operators to sell the fruits of their labors prematurely, at future prices.⁴⁻¹³ In this way they expose themselves to the endurance of all the evils of the worst disasters, without enjoying the profits of high prices. This impoverishes them and causes them to restrict cultivation to a smaller land area, heaping harm upon the entire state in order to save themselves. In the meantime, money is all gathered into the hands of tradesmen, which is to say, of the tyrants of commerce, whose gains are greater, despite the fact that since they neither cultivate, labor, nor truly produce any commodity,⁴⁻¹⁴ they are of the least use to the state.

Oppression of the poor.

II. But the poverty of farm superintendents is shielded from them by such means that the suffering from it falls on the miserable peasants and farm hands who, because they cannot be paid in cash by those who superintend them, are paid with grain, wine, oil, cheese or lard. These goods are not only valued at the highest prices, but are often provided to the peasants in a damaged, fetid, and decaying state, with all the cruelty and barbarity that is companion to avarice. So universal is this grave tyranny, that peasants are unable to protect themselves from it. Thus, the condition of the people most useful to the state, the peasants, becomes all but hopeless.

Ruin of the farms.

III. In yet another manner farms themselves are destroyed. When master craftsmen begin to pay journeymen with provisions, the number of buyers at markets and fairs is reduced. It only appears to them that a few get a large portion of the goods for distribution, as payment to farm laborers. Where there are few sellers, or few buyers, prices move freely only with difficulty. This is why peasants find very low prices for their goods, from which, as a result, they are unable to recover the expenses of their farms which, in turn, go quickly into ruin. England suffered such inconvenience at the time John Locke wrote. Because of a deficiency of money,⁴⁻¹⁵ cloth merchants caused most farm tenants to fail, for the causes just discussed.

Origin of usury.

IV. So small a quantity of money must be regarded as the mother of usury and of that species of profit which we have refurbished and embellished with the name of *interest*, a name less odious and horrible but often no more virtuous. Excessive profits, which are made by purchasing goods and reselling them after holding them for a few months, also arise from the same cause. This may well be called *interest* and simply usury on the owners of the land, who have found it necessary to sell their harvests too prematurely.

How the difference in interest arises.

Nor does the increase of money shield the greatness of the usury, as many believe; it only improves its circulation⁴⁻¹⁶ and destroys the monopoly. There is always the same inequality between one who has 100 ducats and one who has 1000, or as there is between one who has 200 and another who has 2000. But if one who earns 100 ducats at annual interest should have offers to invest from ten persons, which he should decide not to take, then he would still not have been subject to such difficult conditions as he would have had from just one ancient despised usurer. This is why interest is between seven and nine per cent in the kingdom, and between three and five per cent in Naples. In an entire city there is but one person who would have any he could give; in the capital there is virtually an infinite number. Many times not even this one exists, instead there might be some rich chapel or confraternity whose administrators would cheerfully take their money, even at high interest rates, hoping not to have to repay it. Ending bankrupt of such hope, finally, they augment with their ruin the income of that holy place which has become their money changer. Thus, in our time, the poor have become usurers to the rich, and the rich the administrators of the incomes of the poor.

Evils which result from

This appears to me to be the place to attempt what I promised in the preceding book, namely, to discuss

the stagnation of the money supply.

how great a defect it is for money to flow into the hands of a few and to stagnate there.²⁻³ Such a situation always originates from defects that exist in the fundamental rules of government, which equally fundamental changes inevitably follow. Ancient Rome, whose kings were plundered until the First Punic War,⁴⁻¹⁷ had no other noteworthy events but the conflict growing out of the unequal wealth of its citizens. When this was altered, with the acquisition of new lands and colonies, and with the adoption of agrarian laws -- the republic changed. It changed from aristocratic to democratic, so much so that it ended as a single democracy, according to the natural order of similar changes. Cruel usurers, servitude, popular uprisings, tumult, the extinction of debts -- all grew out of unequally distributed wealth. All of these derived their origins principally from wars, as much because they were continuous, as because they were conducted at the expense of soldiers, that is, of peasants who foresook their labor in the field and the harvest of their crops to go to war. Contention at the Senate, composed entirely of the wealthy and of usurers, was at the heart of fighting wars. As the population became strong by fighting, often even victoriously, the fruits of plunder brought them some relief. In the end, virtue, thus acquired, gave them courage to change the form of government from aristocratic to popular. Wars, then, are the primary reason for the overflow of wealth which, even in our day, in time of war, is all seen to flow into the hands of superintendents, merchants, and tax farmers. This is why augmentation of the currency, by means of which the prince rids himself of his obligations to the public, is not harmful to them, but is instead salutary.

Remedy for a slow circulation.

I. Small payments and payments to neighbors.

These are the ills of insufficient circulation. It is now proper for me to say something of the remedies for these ills.

I. The first of these ills is the minuteness of payments divided into short intervals. If a thousand men must pay one million ducats on the same day, then they will certainly require a million ducats on hand, since no two men would be able to pay with the same money. But if they should make two half-year payments of a half a million each, more of the money used for payment would return to their hands and reappear again and, thus, a million could be represented by six or seven hundred thousand *scudi*. In other words, the smaller and further subdivided payments are, the less money is needed to complete them and the less is the amount remaining inactive and hidden. Locke has con-

sidered this problem very learnedly. It seems to me that our kingdom does not face this danger.

II. Fairs and markets.

II. Great circulation takes place at great fairs and markets at a single location, and often without money, because all contracting parties are present at one time. In order to encourage fairs, it is appropriate to allow some exemptions from customs duties, since the value of merchandise at a fair is always greater when it is not actually necessary to bring it directly to the places of sale. This is principally true for the kingdom of Naples, which is especially accessible from every direction, at little expense, because it is a promontory in a sea of ports.

III. The use of contracts and payments in kind.

III. Contracts *alla voce*⁴⁻¹⁸ are helpful to a country for promoting cultivation, when the *voce* is well placed. And payment of workers, in kind, rather than in cash will be most valuable, when the workers are not oppressed and treated badly.

IV. Good order in the exaction of tributes.

IV. The proper regulation of tariffs is manifestly useful for the orderly circulation of money. If payments which are usually made at the customs house in Puglia²⁻⁴ at the termination of the fair, when the fair is abandoned because of the heat, were made instead in November -- the owners of flocks would be ruined. Tariffs should, therefore, be levied in such a manner that whoever must pay them always has money on hand for the purpose. Nor is it unworthy of a prince to arrange for the exaction of tributes, at least in part, for those goods he finds it necessary to buy. A prince who gives his troops 100 thousand *tumoli* of grain, purchased with cash collected in tributes, burdens the owners of the land as though 130 thousand were actually exacted. The 30 thousand is the profit of the wealthy, that is, of tradesmen and financiers -- people who do not deserve to earn them because they are less useful than the first. Moreover, the money travels a longer route. To make the river bed more tortuous is to reduce its circulation.

Origin of the power of the old principalities.

From regulations which collect taxes in works rather than in money, which were used in barbarian times -- not because of prudence or out of love of the public welfare, but simply out of necessity -- comes the great and marvelous power which the people and the princes of that era are seen to possess. Their great structures and other magnificent and stupendous works reveal how much more they would be worth²⁻⁵ than we are. The prince who does not reduce his entire patrimony to money is always wealthier, just as a private individual is wealthier when he lives in the

midst of his own lands and does not have to purchase everything he would have to buy with specie as if he lived at some distance.

V. Ready and just judgments.

V. The brevity of quarrels and the security of written agreements -- which, perhaps, deserved to be listed first.

VI. Clear laws.

VI. The liberty of money and a minimum of legal prohibitions. It is impossible to cultivate land well when it has a hopelessly confused title or ownership, inheritance or dowries, legal divisions, mortgages, and debts on it. Nor could it be sold, for the money to the buyer is not secure. As for keeping land uncultivated, I have sufficiently emphasized the extent of the harm which that entails.

The evil of legal carping.

Thus, it is erroneous to believe that persons troubled and confused by legal quibbles contribute to the welfare of a state by setting wealth in motion and by bringing new families forth daily. I do not deny that litigations not only do not generate stagnation, but actually cause a vigorous movement of properties. Instead of leading to the passage of wealth from its holders to those who aspire to own it, it moves the wealth from both of these to lawyers. The lawyers, in turn, weary for lack of secure outlets on which to employ it, spend it all prodigiously -- dissipating it among common folk, from whom it is barely recovered and from whom it is again devoured by lawyers. Thus, it is returned anew to where it started. Nor do lawsuits cause universal poverty. At the same time, I must admit that they make life sad and bitter, and consume time and effort which could have been used much more profitably, if everything were truly devoted to multiplication of the quantity of riches instead of to changing its owners.

Our present state.

As to the circulation of money, despite the fact that I had planned to discuss this elsewhere, I would still like to point out here the two serious harms believed to be found in it, in the kingdom of Naples. These are: the disproportionate greatness of the capital, and the disproportionate greatness of tribunals, regarding which it is more correct to say were bad at one time. But, as it does for every disease, time either heals the illness, or alters the constitution of the body in such a manner that it becomes accustomed to the disease and converts its nature, so that finally it no longer constitutes an illness. It is true that the coming of one's own prince legally and inevitably makes the capital, in which he resides, grow more and more, and draws even more conflicts to the

VII. It is of infinite benefit to have your

prince.²⁻⁶

courts of justice. But after a short time, both become better; and the capital rises to such greatness that, in the end, it expels the new hosts. At the same time, with the advent of liberty and the growth of trade, the provinces become more populous. As for the tribunal, oppressed as it is by the throng, it is only corrupted by the conflict. In addition, it is thrown into disorder in such a way that -- because it is no longer possible for it to grow worse, and since it has never regarded its rise as due to human events -- it is necessary for it to reorder and improve itself. As for the citizens, they are due no blame or merit for all these events; these arise from natural causes.

The simple presence of the prince suffices to heal every infirmity of a state. If he should be possessed of a fine and virtuous will and of a great mind and much wisdom, like the prince which Providence has bestowed on the kingdom of Naples, then -- moved, perhaps, to compassion for its great and enduring adversity -- that mind anticipates the time of recovery by a great deal. But every prince who is not a tyrant revives a state. Hence, I have listed the existence of a prince as a seventh principal means of perfecting the circulation of money. It is he who provides everyone with employment and with the motivation to work; it is this which gives rise to luxury and, from luxury, to magnificence, to joyful and marvelous customs, as well as to the arts and to noble studies and happiness.

Since I have so often called attention to fashion, it is not beyond the scope of this work for me to discuss it here again, at somewhat greater length.

DIGRESSION ON LUXURY GENERALLY CONSIDERED.

The dread of luxury.

All men have an aversion to certain words, the idea of which is so obscure and unlike the thing they describe, that the words, and not the thing they represent, come to be blamed with all but universal agreement, when the thing should be. What is even more surprising to the wise is the fact that such odious traits are believed to be rooted in all,²⁻⁷ or in nearly all, of those who abhor them. I shall not attempt, here, to enumerate all of the words which I believe are of such a nature; for I would not be able simply to name each one of them without showing

that it belongs to this category, and without exposing myself to the danger of being regarded as foolish and mad. Nevertheless, I shall name here only one. This is the word *police*⁴⁻¹⁹ which everyone should long to have in the conduct of his life and which, at the same time, everyone should scorn as an enemy of innocence and virtue. None should ever risk defining it.

Similar to this is the word *luxury*.⁴⁻²⁰ This is said to be harmful and ugly. Teachers of customs forbid it; historians deplore it, as do -- even more -- poets and orators. Comics deride it. Laws deplore it, and it is severely criticized in private conversations. Despite the fact that the world has it in abundance, all nations and all centuries, except for those which are barbarian and untamed, have had it. Yet no one knows nor dares to say what luxury might properly be. This spectre, as it must be called, wanders among us, never seen in its true light, or recognized for its efficacy; and it, perhaps, never occurs to the virtuous.

Its true identity.

And yet, whatever else it might be, it is surely a child of peace, of good government, and of the perfection of the arts useful to society. For this reason it is close kin to terrestrial happiness. Luxury, moreover, can be nothing if it is not the introduction of trades and shops for products which are meant, not as absolute necessities of life, but for pleasure. And luxury cannot be born, therefore, until after the necessary arts have already been sufficiently provided by producers, which occurs in two ways. It occurs, either when the population is increased, which results from peace and good government; or else, it occurs when the arts are perfected, which is nothing but the discovery of new ways by which a manufacture can be completed with the use of fewer hands, or (what is the same thing) in less time, than formerly. But by then many are unemployed and, in order not to die of hunger, they turn to the satisfaction of men, with less necessary works, or with luxuries.

True shortcomings of luxury.

It is, therefore, certainly always true that luxury is the inevitable beginning, the announcement, of the approaching decline of a state, just as the yellowing of the ears of corn is a sign that they are about to turn dry. This is the indication of a decline which is, nonetheless, much awaited and expected, and for which much sweat has been spread, many cares taken, much labor undergone; it is an indication which appears with the beautiful season, and one which is always joined with universal happiness. Fresh and green,

then, is the plant, but unfruitful in the midst of the storms of winter; too soon it withers away once we have been enriched by its fruits.

Indeed, kingdoms and empires are the noble plants of the august garden of God, filled as they are with force and with fierce vigor, in their development between wars and internal discord. But even as they are reduced to peace and opulence -- with the valor of armies and the wisdom of law -- wealth and luxury begin to corrupt them, without their ever having lingered for long over any stage of their development. As bondage returns, a multitude of evils which have their beginnings in slavery, are also seen to return. And, thus, we travel endlessly from disorder to order; from order to disorder. To wish, therefore, to impede luxury in prosperity is tantamount to wishing that crops, long cultivated, should bear no fruit, or that they should still remain green after they have bloomed.

Because they are effects of prosperity, they are without remedy.

It is not proper, therefore, to applaud luxury and laud it as the origin of every good, as Melon has. It is an effect and not a cause of good government, which it follows and which it often corrupts, and whose enemy it is. But it should not be cursed as much as it is, for it can be converted to such a state in which it is not very harmful, causing the industry of neighbors, not of foreigners, to be used for making luxury goods. As long as this harm is avoided, all others which are so loudly declaimed are not the same. If noble families become impoverished from luxury and extinguished, commoners are multiplied and comforted. There is only one difference. Ancient families, which appeared for the first time in times of war, have no other origin but one among arms, no other riches but those given them by rapacity, war, and civil disorder. New families have flourished in centuries of luxury, by industry, on the breast of peace. Which of these methods of growth would be preferred is easy to distinguish. But because poets and orators have preferred to render military barbarism glorious, describing it as virtuous, because they have declared mercantile pursuits to be ignoble -- men value the former way of enriching themselves more highly than they do the latter -- which is not surprising to me. I am most surprised, actually, that many who are knowledgeable concerning customs are not aware of the fact that they allow themselves to be carried away in the wake of common errors; that they condemn luxury loudly but, at the same time, take great care to conserve those families which often serve no other purpose than to be illustrious monuments to the

unhappiness of centuries past. The prince, the common father, must not nourish similar considerations. Aside from the wealth remaining within the state²⁻⁸ and passing from one to another peacefully, he must be concerned with nothing else. Surely, today, when the world is so full of inhabitants, one cannot enrich himself without impoverishing others. And whoever could observe all the earth, almost from the heavens on high, would find Chinese and Japanese,²⁻⁹ at whose expense some Europeans have become enriched. The only difference would be between becoming rich by arms and becoming rich by industry. Arms despoil neighboring peoples who then become subjects and friends; commerce drains even the blood of those who are distant, less gloriously, perhaps, but with greater comfort. This is why princes are careful not to leave their subjects prey to the fashion of foreign goods. On the contrary, as much as they can, they should enrich themselves -- and then think of nothing else -- on people who are sumptuous and lazy or, to state it more properly, on the badly governed. For, by the laws of nature, the industrious will always be rewarded by their labors; the indolent will always let themselves be bested and left impoverished.

Exceptions to what has been said above.

What I have said here refers to luxury, goods in general, though there are many which are especially harmful. Such are those which keep many persons lazy and useless; those which increase poor relief, and, that which is connected with it, the impunctuality of debtors. These are defects which are all deservedly criticized and corrected, and with good reason. But to speak here of each one of these would lead me too far from my present purpose.

CHAPTER 2

INCREASING THE QUANTITY OF MONEY.

The error of remedies similar to those of physicians.

The remarkable resemblance between the human body and the bodies comprising great societies is well known. Yet it is not clear to me why all the utility that could have been gained from such knowledge has still not been taken from it. Since many parts of the remedy have been improved and reduced to truth, it is natural for politics,⁴⁻¹ her sister, to be illuminated from the reflection shed by the light cast by the remedy. For many years, blood letting has been vehemently opposed by a sect among our doctors who have contemptuously held that blood is a pure and noble nutriment which costs a great deal of time and effort to form, and which contains in it the principal seat of life. For this reason, it is against nature for man to cast away something so loved, multiplied and preserved by her. Experience, however, has prevailed over syllogisms and, in the end, it has dissipated these larvae, making the utility and necessity of blood letting clear. Neither the acquisition nor the maintenance of a great volume of blood has sustained life. Life is sustained by its perfect composition and by keeping its quantity in its proper proportion to the body and to its motion in the veins. In this way, pernicious error was eliminated, and many illnesses at first incurable, are no longer perilous.

The science of government still has its Galenics which resolutely teach that money is the life blood of a state, its nourishment, and its vital sap. They teach that it is always necessary to increase it and to never allow it to remain in the pernicious form of plate. They assert that everything that leads to the acquisition of gold and silver and keeps the mint active, should be exported, thus, immersing us in gold.

They propose the evacuation of our own mines and the conquest of others. And they long for reduced trade with the Old Indies which dries up our supply of precious metals. Finally, they propose laws which would impose severe penalties in order to prevent the export of coined metal. The resemblance of principles, arguments, and consequences should cause us to doubt that this could be a common error; nor does the uniform agreement of all the policies in the above sentence suffice to assure that they are true. Hence, I shall show, possibly for the first time, that because of the same fallacy, both philosophers and writers on the art of government²⁻¹ have erred, and that none of the counsel mentioned is good and faithful.

False sentiments of Muratori.

Lodovico Antonio Muratori¹ has written as follows:

It should be noted, then, over all other things, that the economic government of a country is reduced to a single most important maxim: that is, let the smallest amount of money leave the state as you can; let the greatest amount possible come into the state. All know how advantageous this would be....⁴⁻²

In Book II I demonstrated that in times of adversity, money is not a state's truest friend, as many faithful subjects would be, because true friends are always of more benefit to a man than great wealth would be. I shall demonstrate here that when money is excessive it is not a friend but rather a foe.⁴⁻³

Disutility of an increase in money.

Let us suppose, to begin with, that our kingdom is already sufficiently provided with money; so much money has been created that the state possesses an amount equal to 36 million ducats. As long as such an amount of metal remains among us, the state will be neither wealthier nor any better off. The circulation and distribution of money would not be improved by increasing its quantity, if new money is distributed in the same proportions that existed before the increase. Indeed, unless better laws are adopted, this is exactly what would happen: we would now withdraw only as much as is necessary in order to exchange with six ounces of metal what was previously obtained with three. A greater weight would be troublesome to anyone, rather than beneficial. Thus, as long as the new money re-

¹Felicità Pubblica, at the beginning of Ch. xvi.

mains among us, the gift will have been useless and not desirable. We would surely be able to obtain many commodities and many comforts of life for the money, if we should export it. But, since our kingdom produces in abundance all the necessities demanded, we would only be able to buy luxury goods and goods which are unnecessary. This only serves to promote the sale of the industry of others, rewarding their labors and increasing their wealth, giving them means to purchase our grain, wine, and oil with the very same money, thus nourishing and populating themselves, making them stronger and more powerful than we are. In other words, if the increase in money is retained, it is useless; if it is spent it is harmful. For it is obvious that whoever governs must always devote himself to weaken the princes of other lands in those ways which do not offend virtue and religion. They must always render the lives of their subjects happier and more desirable than those of nearby people.

It is harmful to allow the purchase of excess precious metal.

Worse still, gold and silver are never given to us, they are purchased with our goods at a high price, and are either sent to America or sent to people who send us their goods. As long as a nation provides itself with enough specie to fill the channels of trade, the expenditure is surely just; the purchase of such necessary specie is not dear at any price. But he who has the correct quantity of specie, cannot purchase it with goods which are not more useful than the metals, which in this case become, in fact, much more useless. Why then, should the abundance of commodities abroad be increased, including sometimes even those of enemies, in order to fill us with ornaments of beauty and luxury? True, I demonstrated in Book I that the intrinsic value of the metals is established by our nature; that it is neither chimerical nor capricious. But, at the same time, I have not said that grain and wine do not also have a true and intrinsic value. In fact, whenever it is possible for us to have an abundance of either one or the other, it would always be better to have more of the latter than of the former.

Excess money reduces the population.

Excess money constitutes an additional obstacle to the people whenever a great deal of it exists. It cannot help but be cheap. Goods and services⁴⁻⁴ cannot help but be dear and manufactures must, therefore, be worth much more. As a consequence, if they were to be exported, they would have a small sale abroad, where -- because of the scarcity of money -- a high price is troublesome and regrettable.⁴⁻⁵ Moreover, foreigners would avoid settling in a wealthy kingdom, except for

those who bring nothing but their bare and wretched bodies, those who are really unwelcome guests. This is because they do great harm to those who earn income where, because of the height of prices, people are instantly deprived of the better part of the comforts of life. The same citizens are induced to leave a country which reduces them to such a frugal life, to flee from it and to become richer without any additional effort.

The present states of England and Holland are clear examples of what I am saying here. The laws of English governments are eminently fit for attracting immense sums of money into England, where there is no concern about the high price of food -- even of grain itself -- as long as part of it can always be exported and sold to neighboring peoples. The effects of such laws have been that the population of England has not grown by as much as it could have, because of the immigration of so few foreigners. As for Holland, after she was fully populated, most of the Huguenots expelled from France inundated Germany. They also avoided England which is closer but in which they were not certain they could make a living. Many skills, such as printing, for example, have become less important there because the English have not been able to sell their books at low prices and, in addition, people abroad have not been willing to purchase them because they have become too dear. Indeed, except for the excellence of their manufactures, nothing that comes from England would be purchased. As a result of this, Holland, the laws of which are more appropriate for attracting people than for attracting the metals, has become incomparably more populous than England and has proportionately much greater power. Finally, the same English, enjoying greater pleasure from the travels of their wealthy people than from the poor living at home, have unalterably opened the doors to the outflowing of so much of their riches.

The true maxim of good government.

To conclude, therefore, the basis of a very good government is not that of Muratori, but is this: it should wallow in abundance of provisions, not abundance of gold; it must let as few people as possible leave, and as many as possible enter. It should enjoy seeing itself populated with a mass of companions and fellow citizens. Would you prefer, many ask, not to export and sell provisions?¹⁻²⁵ I reply that I would want to harvest as much as the land could produce. Following this, I would wish that we had so many people here that not even a pound of it would remain for export. Happy that government under which the nourish-

ment of the nation's people is not expensive; so that to come here to reside is desirable, to make a living easy, to depart, difficult.⁴⁻⁶

It is not worthwhile to melt down our plate made of precious metals.

As for the disapproval by many, of the fact that the precious metals in our utensils and sacred vessels are not melted down, I believe that this practice shows vile and ill advised avarice, intermixed with little religion. True, I have just censured the increase of our money, and I should, therefore, also censure -- with infinitely more reason -- the increase of so much stagnant metal. But keeping much of it consecrated to sacred worship and much devoted to ornamentation and sheer magnificence is not always blameworthy.

It is not even worth working one's own mines.

On working one's own mines, these wise words of John Locke must be kept in mind:

It may be observed that almost all nations filled with mines are by nature poor, employing all of their labor and, thus, destroying all of their inhabitants in the excavation and purification of the metals. Hence, it is a wise policy on the part of the Chinese to forbid the working of their own mines. Indeed, gold and silver which are mined do not enrich us as much as their acquisition by trade. This is for the same reason that one who wants to tip the lighter side of a balance would, instead of adding new weights to the emptier side, transfer them from the heavier side. He would, in this manner, accomplish it with half the difference. Likewise, to be wealthy is not to have more gold, but to have more of it compared to the rest of the world. A man would not be a grain richer²⁻² if the amount of gold he has is doubled, if -- at the same time -- the discovery of new mines causes the quantity of money in the world also to double.

It is harmful to carry on a war in order to gain mines.

If it is useless to dig one's own mines, it cannot fail to be harmful to fight in order to occupy and take from others, by violence, what it would not be appropriate to mine -- not even for those to whom it has been benignly provided by nature. If the true and great value of a man were known, one would understand what great madness and serious loss it is to destroy

men in order to acquire metals. According to the calculations I made above,¹⁻²⁶ a man may be appraised as equivalent to capital of at least 1,200 ducats. A soldier, then, who is a young man of exactly the proper age to make him most useful to others, can be valued at, at least, 2,000 ducats. It should be clear, then, whether a vein of metal, which costs the loss of a battle to acquire, is bought at a good price or is purchased at too dear a price. But I do badly to try to reason of such things in this fashion. It is a rule of nature that wars exist because there must be a beginning of destruction before there can be one of new production. If men did not have differences over the acquisition of the most beautiful and luminous bodies, they would fight over titles, rank, enterprise, forms of dress and many of the ideas and names that are less real and important in nature. It is better, therefore, that I turn to a demonstration of how little use there is to keep the mint in operation against the advice of many who, in giving it have, perhaps, been drawn away from latent private interests.

It is useless to keep the mint in operation.

The minting of new money is considered for only two purposes. Either so that the prince may profit from it, or in order to fill a state with money. One of these sentiments is base, the other is false. I will examine the former first.

In barbarian centuries, when, from among the small and contested income of the sovereign, none was better than the one coming from the mint (which was operated for gain), this was laudable, indeed, almost pardonable. But, that some still continue to think in this way today, can be attributed to just one motive: this is, that an old impression continues, mechanically to endure. In fact, the mint privilege should be as small as possible. Two per cent is just enough. At two per cent a prince acquires 20 thousand on a million ducats, not too large a return in these times for a prince who is not too poor. And, if the cost of transporting the metals and the profit that their suppliers might make is taken from such a gain, it is reduced even further. The mint cannot give employment and sustenance to more than 200 persons. A manufacture which yields so little to the prince and nothing to his people is not worthy of his attention; 100 people compared to a whole staff is really nothing. Not even the example of the wisdom of Venice should be cited in contradiction to what I say here, despite the fact that the Venetians enjoy the greatest gain from the generally unknown temper they are able to give gold, rather than from the mint.

In fact, I am convinced that if they should temper the gold and then sell it as gold, in bars, they would reap an even greater gain from it.

The example of other states is even worse. Men would apparently sooner servilely emulate a method used by others -- even when it is useless, and sometimes even harmful to them -- than to think about and bring forth a better one. To determine whether this is true, you need only consider the following.

The cost of thrashing grain by having horses trample over it, as is common in the greater part of our kingdom, and of all Italy as well,²⁻³ inclusive of the damage done by the death and abortions of mares, the harm to colts, the grass which the horses feed on, and other costs -- may be regarded as a quarter part of the expense of a harvest. In our kingdom this comes to two *carlini* for each *tumolo*; but in favorable years, horses damage at least 5 million *tumoli* in this way. Consequently, a machine¹⁻²⁷ which could accomplish the thrashing without animals would be worth a million ducats a year, if one could be found. More than 20 thousand persons would, thus, have a month of free time to occupy themselves in a less burdensome type of work. Besides, an immense quantity of land would be gained, for it would no longer be needed as grazing land for animals hitherto consecrated to a labor which is so mortiferous and fatal to them. I defy anyone to name some writers who have applied themselves to the public welfare and who, instead of counselling such a small profit as can be made with the mint, have described one as great as that just mentioned, or others which are not smaller, and which would yield a greater abundance.

Happy are they who understand that they have all been made agriculturists by nature; that all of their riches and comforts have been lying in wait, under so many clods of earth; and who do not seek, with metals, or words, or with paper and other mysterious implements -- to give real body to that nothing which can never hope to satisfy them.

The mint does not produce an abundance of money.

The other utility which the mint is imagined to possess is the abundance of money which it is expected and hoped to provide. Such a deception cannot be dispelled any more effectively than by showing how ridiculous it is, by recounting a brief story.

There once lived a man who, upon discovering that he was virtually destitute, and not wishing to believe his poverty was due to his own vices and worthlessness, attributed his poverty to the fact that he lived at

such a distance from the mint, which he had never even walked close to. Changing his place of residence, he rented a small room which was only a few steps from the location of a great press. Willingly did he endure all of the deafening vibrations and clamor of the blows of the press, in the hope that some night, coins would gush from the press to the floor below. One night, after lying awake in vain waiting, for what during the daytime was so disturbing to hear, he arose angrily and entered the mint — only to discover that the money was no longer in the room with the press he admired so much. He failed to understand how, in view of the fact that his home was so close to the source, the money could have left the mint and somehow gone past his home, to be spread among the people and dispersed with such force among rich merchants. Weeping, and swearing bitterly, he cursed his ill fortune. On hearing the cause of his lament, an old man nearby approached him and attempted to reason with him. He tried to persuade him that the money which is minted is spread among the people, and is not spilled to the ground, or rolled into the streets and towns. Instead, it is distributed by many other channels, many of which feed the merchants while others lead to ministers of the sovereigns and many other individuals — all of whom are to different degrees thus enriched. At this, the miserable wretch grieved even more bitterly than before, as he realized that he had been deceiving himself, and that he had been experiencing all the disadvantages and discomforts of coinage without enjoying any of the pleasures which result from the use of coins.

The reason is that coins do not always remain where they were made.

Why wars impoverish a nation.

The same thing must, of course, be said of cities which contain mints. For it is quite possible for a very poor city to have the greatest mint in the world, and, at the same time, for its citizens to have no money at all, except for what they can acquire by plunder. One must determine the channels by which gold comes to the mint, as well as what route the coins later take and where they come to rest. When gold is not bought with the country's commodities, it can never remain there.

For a similar reason, wars which fill a nation with money never enrich it. After a few years, the money is found to have been collected in some provinces, close to such a nation which because it had been the seat of the war and the first point of accumulation is also impoverished and destroyed. This is because a man who has, say, fifty casks of wine, one hundred tumoli of grain, and ten ducats, is richer than one who has thir-

ty ducats but no wine or grain. It is impossible for an army to pay for all the harm it does, because it always takes more than it gives. The money it gives, purchases only part of what the army consumes. It would be necessary to spend even the money which was formerly on hand in order to recover all that is lost.

How it occurs that the accumulation of money is sought.

Human desires, however wise or foolish they may be, always have a cause. It is always most useful to know that cause. I would, for example, like to determine how enough greed to multiply the precious metals they originally possessed came to be found among the Italians; and to determine also how much of the commerce they had, has come to be virtually entirely lost.

To understand the origin of this, one must recall that there are two sorts of principalities, just as there are two classes of men in every principality. Some men cultivate, produce, and work for foodstuffs and other commodities. Others make no new ones at all but place those already made into motion. I call the first of these men cultivators;⁴⁻⁷ the second, merchants.⁴⁻⁸ The former have little need for money, but have a great need for materials and for land with which to produce riches. The latter use money as their stock in trade. Their only concern is to bring it all back into their hands, to the end that — having provided it to the cultivators — they might soon have some merchandise in hand, at a low price, and eventually derive a profit from it. Since they actually have no need for the goods, they hold on to them patiently. This is why they are the least useful, sometimes even harmful part of the state.

Differences in principalities and causes for the diversity of maxims.

All this is valid for nations too. Those which, like France and Spain and most of Italy, possess vast and fertile lands on which all of nature's gifts have been bestowed, have no need for a great deal of money in order to live happily. Nor need their trade be other than the industry of cultivation and manufacturing. But other nations have found themselves confined to locations which are either mountainous and sterile, like Genoa or Switzerland, or marshy, like Venice and Holland. A niggardly nature has denied all of these nations. Consequently, once they became the shopkeepers and merchants of the world, they treated great kingdoms close to them, in the same way merchants treat farmers. Such republics have, for this reason, prudently sought out every means of multiplying money, the acquisition of which was for them virtually tantamount to conquest over new lands. But those people who have lived in the midst of fertile lands but have

cultivated them badly, have been moved by a childlike envy and have inappropriately sought to emulate those who are in very different situations. Equality with others is not always achieved by following and imitating them. It has, therefore, been unwise to propose that Italians accumulate money when, sound asleep in ultramontaneous rusticity, they have kept their happy fields devoid of plants and their cultivation.

The circulation to be permitted to foreign money.

Before concluding, it only remains for me to mention the introduction and circulation of the coins of other princes which are permitted in many states. With reference to silver coins, one may speak of great principalities or small ones, such as Italian duchies, German electorates, and others. It is always better to exclude the first of these completely; in the latter, silver coins are too troublesome for trade among citizens, many of whom live under different princes. But I have judged it convenient that their own money should never be made equal in value to that of foreigners. It will surely seem strange that I think this way, since it even seems convenient to avoid any disparity, which is always so troublesome. But I must admonish my readers that to admit foreign money into a state always brings with it the risk that those alterations and evils which it suffers in its own land prevent it from being tested by weight in the country which receives it. For this reason, it is always beneficial, not to allow the people to associate ideas which lead to the conclusion that two coins are equal, when only one of them and not the other, is guaranteed by the prince. Wear, clipping, alteration of value can all cause inequality in coins as irreparable by the sovereign as they are disastrous to a state.

Gold coins can be allowed to circulate freely by weight.

As for gold, it is beneficial when all take it by weight, for it has no value, except for that agreed to by common consent. Liberty is such a precious gift from heaven that princes must never take any part of it from anyone, or restrict its use, except for the most serious causes and necessities. For this reason, the introduction of gold and its valuation in accordance with its owners' pleasure, must not be prohibited, since it can never be harmful. Whether or not it is appropriate to export it, shall be treated in the next chapter.

CHAPTER 3

PROHIBITION OF THE EXPORT OF MONEY.

Practically all states prohibit the export of coin.

Of all the poor counsel which unjust estimators of money have given their princes, none has been so applauded and universally embraced as the prohibition, subject to serious penalties, against exporting money; and no policy is any worse than this. It has been established in all states, whether barbarian or cultivated. What is more strange is that in some nations, besides praising deservedly acquired civil wisdom, it is also deemed necessary to export those metals with which trade is carried on with the East. But it is even clear that the law prohibiting export is useless, because it is not observed. For even if subjects heeded it, it would be necessary for the sovereign to violate it. Indeed, if both should abstain from infringing it, it would sometimes still be pernicious.

Such a prohibition is useless because it is not observed.

Concerning the first, inasmuch as it is so firmly established in the human mind that each man is lord and master of his own possessions, any law which would seek to deprive him of such authority, would always be trampled upon and would clearly never be fruitful, wherever it is easy to violate. This is understood when its violation is not regarded as against reason and natural justice. Laws whose prohibition is accomplished by virtue and religion are no less perfect than they are powerful. If, however, they are considered to have no connection with religion,²⁻¹ they will surely be ignored. I believe, therefore, that all maxims of good government can be reduced to just one: a principality should never adopt a law prohibiting anything which it would be profitable to violate. The gain need not be great, because to perform any act of liberty whatever, is always useful and pleasant to the human mind.

Violation of such law cannot be prevented.

It is obvious, therefore, that it becomes easy to evade any prohibition against exporting, not only by transporting specie which takes up so little space as contraband, but also with letters of credit against which no skill or talent avails. In 1708, there was promulgated in our realm, then under the German government, (the money of which was all absorbed by foreigners) a law¹ the equal of which was, in my opinion, never made anywhere.¹⁻²

Considerations on a pragmatic of ours.

It was ordered and commanded that no person, regardless of his rank, state, or condition, even if privileged, may dare -- by himself or with the direct or indirect intervention of any other person -- to export from this kingdom any sort of money, in any quantity, whatever the type; or coins of whatever denomination, to Rome or any place whatever in the Ecclesiastical State, with no one excepted, for whatever cause or pretext, even if privileged.

And a quadruple penalty and others which were no less serious, was placed on any transgressor. It then added that

Under the same penalties, we command and order that no person, whatever his rank, may either directly or indirectly have the impudence to receive or cause to be paid, money of any sort, for any cause or pretext, as above, for the purpose of corresponding to the city of Rome or to other cities and places of the Ecclesiastical State, as much for orders as for letters of credit, even if by way of Genoa, Leghorn, Piacenza, Venice or other cities; and for the jurisdiction of the contraventions aforesaid, we order a delay in taking evidence, even if privileged.

It is strange that such an edict should not produce much of an uproar, since it could well be equal, given its expected circumstances, to what the Romans called *acqua e igni interdicere*,¹ and since it was, with regard to temporal effects, incomparably greater than

¹Pragmatic 50, de Monetis.

any interdiction of excommunication which the Ecclesiastical State could have fulminated against the Neopolitan State. It is true that as soon as it was understood that such an order could not be sustained without alteration of religions, the portion which concerned letters of exchange would be revoked and the remainder confirmed. But on careful consideration, you will find that the first edict was wiser than the second, because although the former contained some great absurdities, it seems to reveal this truth: prohibition of export with letters of credit was elusive and sheltered. The second edict discovered that what seemed to have been done after mature consideration, was actually done in impetuous anger, and revoked that part which is enough to render the observation of the rest futile.²⁻² Actually, it would have been appropriate to revoke both of them, and to provide very different remedies for the export of money.²⁻³

Every prince exports a great deal of money from his state.

But if subjects would obey the prohibition of transport religiously -- and they never would -- then it would be convenient for the prince to ignore it. Because with the prohibition of the export of money, only the quantity of one's own goods, the sale of which produces letters of exchange, was increased. For instance, supposing our kingdom exported 4 million ducats worth of goods, then clearly even without transgressing the law, its inhabitants would be able to buy 4 million ducats worth of foreign goods with letters of exchange. In this way, all the letters of exchange in the kingdom would be exhausted. Again, if one considers how much a prince should spend outside his realm, he will find the amount to be great. As for our king, I believe that calculating the expense of all his ministers in foreign courts, that of the *Presidi di Toscana*, the expense of sending his vessels to sea, and many other expenses, the total annual expenditure surpasses half a million ducats. So great a quantity of money must therefore leave the state annually, at the will of the prince. Because it is not possible for this sum to be sent in remittances and bills of exchange, which I have just shown will all be exhausted by the public without the commission of any crime, it will be necessary to send it in cash. As a result, the prohibition the prince makes involves a large sum and is violated by the prince himself. So that when the sale of its own native goods, made by a kingdom, is greater than purchases from abroad, the prohibition is useless because there is never any lack of letters of exchange for those who want them. If it is equal, the prince is

forced to do what his subjects do not dare do. If it is less than if the prince does not violate the law, it will hurt both prince and public. I will now proceed to demonstrate this, as I have said I would.

Prohibition of export is as harmful when it is necessary as it is useless when there is no need for it.

To continue logically and methodically, any country which has any money must have either drawn it from its own mines or bought it from others. Those who mine it directly, and who have an excess of the metal over what is needed for their own trade, will instantly save the excess, if export of the metal is prohibited. They would be no more at fault than if we completely prohibited the export of grain in a year of excellent fertility.

Countries which can only acquire the metal by buying it always export it when it becomes less necessary to its owners than the things they buy with it. This occurs in either of two ways. Either because there is great opulence, or because of some serious calamity. In the first state,²⁻⁴ they either buy goods which are ornaments of luxury, or they buy real estate in other kingdoms. Because purchase of luxury goods results from riches, it cannot help but be the cause of poverty. Therefore, it is inappropriate for the prince to forbid his subjects to purchase innocent pleasures with their aching sweat, which is the cost of the acquisition of the money, and their only merchandise. As for the investment of money in real estate outside the nation, I will discuss this serious matter at some length later on.

The export of money is an effect, not a cause of disaster.

The fear that a state which allows money to leave will become impoverished, which has made it appear good and profitable not to allow it to leave, has been the unique moving force behind those who have counselled the prohibition of its export. More and more, this strengthens our conviction that it is always such superficial and absent minded considerations which spawn grave errors and incorrect opinions which are, nonetheless, most pleasing to the multitudes. But, before prohibiting export, it would have been a prudent thing to consider whether this was a cause or an effect of poverty. Depending on which it was discovered to be, it would have been appropriate for us to govern ourselves one way or the other. Money allowed to leave a country can be a reason for poverty if it is given away wastefully. But when it is exchanged for goods it is, on the contrary, a consequence of some disaster. As long as a place is not suffering from some misfortune, it always has a superabundance to export. It is from sale of these that credits and offers of letters of exchange

result, and with which foreign goods are purchased, without any need for cash. Disasters are nothing but the shortage of one's own harvests. But it is a natural law that there be perpetual instances of fertility and scarcity, and that the relief of one is accomplished with the other. What is more just than for precious metals, bought with our redundant goods, to be resold whenever necessities are lacking? Whenever abundance is restored by Providence, the first thing to return to a country would, without doubt, be the metals. Just as surely as the consequences of diseases are, for the most part, movements which nature reinforces according to its powers in order to heal them, the egress of money is a medicine which at least portends some misfortunes. If grain is lacking from our fields, then exporting money to purchase grain from others is a cure for starvation. Then either gold must be made edible or it must be allowed to leave. When the lives of inhabitants are saved in the misfortunes of a state, then all can be said to have been saved. What other harm do calamities have if not depopulation? This is harmful, not only to those whose lives it takes, but also to those who are left miserable and alone.²⁻⁵ Because the emigration of people is harmful, export of money is a total good,²⁻⁶ if it helps retain our population.¹⁻²⁹ Those who would say, therefore, that the export of money is avoided by: adoption of good laws, construction of quarantine stations, raising of valorous armies, finding of prudent magistrates, and the cultivation of lands industriously -- would be stating true and certain cures for exportation. For wherever there is peace, salubrity, true virtue, and liberty, there cannot help but be wealth and happiness. And, although, when such riches come to a given point, certain invisible and new channels open themselves up, in order to flow and spread elsewhere, this -- which emerges from the power of equilibrium which is in each thing -- requires no remedy, nor would anyone acknowledge it if anyone should wish to provide any. This is precisely the appropriate matter for me to treat in the chapter immediately following.

Exportation is even a medicine for misfortunes.

SOME CONSIDERATIONS ON THE INVESTMENT OF MONEY, BY CITIZENS, ON THE PURCHASE OF PROPERTY SUBJECT TO OTHER PRINCES.

Money also leaves a

Money also flees a state for a reason quite opposite to disasters; this is for excessive prosperity

state because of excessive prosperity.

Reasons why this occurs in republics more often than in monarchies.

and opulence. This has been generated by industry and great parsimony, and has made the wealth of citizens grow in ways other than those convenient to the country in which such citizens were born; hence, they are constrained to invest money abroad, and thus send it out of the country. This is seen principally in republics, and none of these has been more fertile of similar examples than Genoa, whose families have populated Italy and Spain, the very same kingdoms from which the *genovese* have drawn their wealth. It will not be useless to inquire into the causes for this before entering upon a determination of whether it is bad or good, and how and when it is appropriate to do something about it.

Republics are better ordered to hold personal property than land, and better to engage in trade than to make conquests. This is because manufacturing and navigation, based as they are on numerous societies, require tranquility and a long, stable security. And although in monarchical states the virtues of the prince can cause indolence, peace, and security, even they cannot provide security enduringly, beyond the life of the prince, which is always as uncertain as the nature and customs of his successors are doubtful and unknown. In republics, on the other hand, since the principality consists of similar citizens, it can be said that trade is the prince's and that he himself insures it. In addition, the life of the citizens of a republic is more frugal than that of citizens of a monarchy. The former do not have the example of the sovereign and the royal family, who inspire pomp and magnificence, and are less encouraged to spend and, sometimes, even forced by law to live in a humble and frugal state, which does not inspire the ever dangerous admiration and affection of the multitudes. But because republics move slowly, they are sluggish and for this reason unsuited to make war. And although the contrary can be adduced by the example of the Roman republic, whoever has considered the form of that government will know that Rome was not a republic but a military camp, like the Mamelukes,⁴⁻² the Arabs under the califs and the sultans, the Tartars under Genghis Khan, and as the Turks have been in more recent times. Hence, their trade consisted of plunder, which is the reason they were so skilled at slaughtering their opponents. All other republics either failed to assemble militias, or have gathered militias with money, cultivated alliances, occupied lands, won battles and made peace, as the Venetians did in the days of our fathers. Other Italian

cities have likewise governed themselves in the same way -- albeit with little wisdom -- and have not known how to defend with steel, lands which they had acquired with gold.

To turn again to the first theme, when citizens were, for the reasons already stated, immensely wealthy and the state's borders were not extensive, they wished to attract money which circulated in trade. Either because of advanced age, because the fatigued state of business drew them there, or because they wished to establish the wealth of the family and insure its minority, for female administration, or for the prodigality of its heirs -- they sought *fondi stabili*⁴⁻³ into which they would be able to convert it. Whenever their own country failed to provide them with some which were not in use, it was inevitable that those of neighboring principalities would be acquired.

Such exportation does not reduce trade.

Nevertheless, whoever believes that trade is damaged and impoverished by riches derived from such sources deceives himself. True, money leaves the channels of trade, but it leaves as in a flood, whenever the soundness of the foundations on which it rests are no longer adequate enough to contain it. For, as long as a trader is able, he will always prefer to maintain money in trade in which the gain is greatest. Hunger for profit is neither satiated nor diminished in men, regardless of age or the enormity of their acquisitions. But when the channels of some part of trade cannot accommodate greater sums of money, the money itself widens them and then flees, to rest in the coffers of merchants, until it is derived from other sources. In other words, such uses will damage trade to the same extent that draining away any overflow of water would reduce the level of a river.

Conserving useless money does not help the republic.

Neither is it less deceptive to believe that a republic would gain by allowing the money of its citizens to remain cached and buried in private homes. Granting that a law of this sort would never be obeyed, I believe it would not, in the least, help the republic, as some believe, to readily find great sums easily gathered from among its necessities. And, surely, when the enjoyment of riches so laboriously acquired is prohibited, everyone becomes indifferent to their acquisition. Though money constitutes one form of wealth⁴⁻⁴ (according to what schoolmen say) *in fieri, non in facto esse*,⁴⁻⁵ what does not comfort us will not be very desirable. In this manner, the republic shall lose its skills, its manufactures, and its commerce. It shall no longer be powerful on the sea, nor respected for its

wealth. Besides, treasure which citizens conserve would become abundant and vile if spent all at one time in a time of general calamity; it would not even buy a fourth part of the goods it commanded earlier. Finally, since greed is inimical to military virtue and the sister of fear, it shall always follow that riches which if possessors are cruelly prohibited from enjoying in times of peace, shall in time of war, instantly be seized and enjoyed by one's enemies.

Its use outside the republic decreases its liberties.

Even if both these opinions are incorrect, it would still not be wrong to believe that a republic, many of whose illustrious families emigrate to establish themselves abroad, will always lose a large part of her liberties. Private interests never play so important a role in making public decisions, as they do in aristocracies. Since many hesitate to wage war against princes who could with one blow ruin and impoverish them, the republic will always be opposed to going to war. The republic that is not resolutely prepared will have to be ready to serve, and this is why investments made by citizens of a republic, in the states in which they have traded, are a victory which these states return to make of the riches that seemed to enrapture them. Thus, a principality which wishes to remain free, should not allow its subjects to become excessively wealthy.

This notwithstanding is a prohibition which should not be resorted to.²⁻⁷

But, on the other hand, if we should note that the statutes, which are never so arranged as to render our lives beautiful, are more specious than good, we should scorn the laws of Licurgus and so many who have imitated him, which render a society free or feared, but unhappy and wretched. They would like men, wherever they have had the good fortune to be born, to be able to occupy innocently and to aggrandize and transplant themselves anywhere they wish by their labors. Heaven, meanwhile, will care for kingdoms and for the powers, as indeed it should. An obstinate liberty which preserves ferocious and cruel customs, as the ancients did seems to me worse than bondage. Nor do the alluring eulogies of writers fascinate me so much that I do not realize our times are incomparably better, because these are times when -- because of the beauty of our customs and soundness of our religion -- the people are happier than the people of the free nations of antiquity, and unstained by the blood of the people of other lands, or of that of our own brothers.

CHAPTER 4

THE REPRESENTATIONS OF MONEY CIRCULATING IN HUMAN COMMERCE.

To deal at length with this subject, which considers the representations of money, and which -- because of the variety and scope of its arguments, no less than because of the mysterious obscurity in which it is held -- can truly be described as great, would require the composition of a work at least equal to the present work. But because this has not been my primary interest, it can be regarded as being touched upon here only incidentally. And I shall, therefore, discuss it with all the brevity which seems appropriate.

Division into parts.

Representations of money are nothing but manifestations of debt. Their security rests on the difficulty of imitating them; and their acceptance depends on faith and on the good name of the debtor. For this reason, their value is composed of the certainty of the debt, on the punctuality of the debtor, and on the veracity of the token that is on hand. When all three of these requisites are filled to the greatest degree of safety, the representation is equivalent to the value of the things it represents, because men value the present as much as the future which, of course, becomes the present with every act of will. Such representations become money because they are found to be agreeable to those who accept them, and they could be regarded as equal in all respects to the thing they represent, but for the fact that they become poor and false representations as soon as they lose any of the above attributes. Because these attributes are not intrinsic to their nature, they do not endure as much as do the beauty and the splendor of the metals comprising actual money. Therefore, after I have enumerated all the different kinds of representations and discussed their origin and utility, I shall restrict myself to a

Ways of
representing
money.

discussion of what must be done in order to sustain their credit, in such a way that they shall become perfect images of money, and circulate on a par with it.

Since it is necessary, as I have already noted, for representations to be secure against counterfeiting, private individuals have followed the practice of declaring their debt by affixing some character on this type of money in their own writing. This is not only, with a remarkable variability, different for each one, which, just as remarkably, is always uniform for each one, but is also most difficult to be imitated by others. But princes have variously used either the writing of some of their ministers, or the royal sign and coat of arms imprinted on paper, leather, or some base metal. This is the origin of coins called *di necessità*.⁴⁻¹ The safety of the latter is based solely on the fear of laws which prohibit their imitation, which is otherwise easy -- laws which have consequently been able to serve for only brief periods of time. Coins called *obsidionali*⁴⁻² are of the same class and are minted by the commanders of besieged cities when they lack money and when all foreign communications are interrupted. Hence, it is necessary to dispense to the soldiers, not money but signs and certain promises of payment, as soon as the problems attending the siege have been dispensed with. The oldest of such coins preserved were minted in Pavia and Cremona, besieged by Francis, the first,⁴⁻³ in 1524 and 1526. Some were then minted in Vienna, which was held by Suleiman, the first,⁴⁻⁴ and surrounded by the Venetians, in the siege of Nicosia, the capital of Cyprus, in 1570, by Selim, the second.⁴⁻⁵ Finally, in the prolonged and disastrous wars of Flanders, the practice became common, no less because of the length of the sieges sustained there, than for the almost continuous lack of money in one field or another. They were so much more willingly accepted by soldiers when fury and pertinacity made every extreme council more welcome than agreement or servitude.

Paper money
used in
America.

We may set against what I have said of such coins, namely, that they cannot be used except for a short time, the examples of the English colonies in America. For many years, only paper money⁴⁻⁶ circulated there, the esteem for it never faltering. But such an event is very strange indeed, and it must first be shown to be true. Its cause must also be explained. In *Relazione del viaggio all'America meridionale*, Book

Three, Chapter Nine¹ we find Boston and Pennsylvania discussed in these terms:

These colonies are so large, so rich and populated, that they do not even use metallic money; instead, they use paper money, similar in appearance to ordinary money. These are made of two small rounded pieces of paper attached together and signed with England's coat of arms. All money, from the lowest to that of the greatest value, is made in this fashion. Trade is carried on with them without any need for silver or gold. In accordance with how they are used up or damaged, there is a place where new ones are stamped. For all practical purposes this is their mint. Then, in each city, or land, there are locations where they are distributed, new ones being exchanged for old which are left there and burned. The ministers' faith and loyalty in this matter is marvelous; they commit no frauds by multiplying their profits on such money. But one thing, which seems strange and incredible, will cease to be so when it is remembered that the Pennsylvania colonies are for the most part populated by Quakers, so much so that the colony, which is still flourishing, continues to be governed by their laws. Quakers are a class of sectarians who, in the midst of many ridiculous and strange rites, are likeable for the exactness with which they observe natural laws, to which they are almost superstitiously committed. Nor were all the torments imagined in England sufficient to make them swear an oath in any instance in which the laws of that government required taking an oath. The Quakers have resisted so fiercely that Parlia-

¹Such a voyage was made by the Academicians of Science, of Paris, accompanied by two very learned Spaniards, for measuring the meridian. This voyage has been recorded by Signor Don Antonio de Ulloa.⁴⁻⁴⁵ Since he was, upon his return, imprisoned by the English and taken to Boston, he also gives us a description of that place.

ment has been forced to declare that the simple statement of a Quaker is equal to the solemn oath given by others not in this sect.

How money made in this way could endure.

It has been possible, therefore, to sustain a very arduous and difficult duty because: I. The colonies of Pennsylvania have only savages for neighbors and, consequently, do not fear that their paper will be counterfeited; II. They only trade with England, which they can watch carefully and attentively. Finally, because extraordinary actions, which seem to exceed human strength, can truly be counselled by virtue. The only fanaticism (wretched condition!) is the obstinate duty by which some part of the group can make all the others follow faithfully. This is why false sects have followed some policies which Christians have admired, though they have in all honesty not been able to emulate them. Hence, the example of paper money cannot be taken from Quakers and imitated.

Different sorts of obligatory notes.

We turn now to a discussion of different sorts of paper obligations, some of which manifest private debt, and some public debt. All can be classified as either profitable or barren. I shall not speak of private notes⁴⁻⁷ here, because their signatures are not well enough known. Their authority -- the authority behind them -- and their authenticity are even less known. Moreover, it rarely happens that they are accepted, except by direct creditors and, as a consequence, they do not circulate as money. Therefore, in what follows, I will confine myself to notes expressing the debt of public individuals.

All of these bills⁴⁻⁸ originated either from deposits, loans which have been made, or unions of societies. This is how banks' revenues (which are known by the Spanish term *arrendamenti*⁴⁻⁹), and companies⁴⁻¹⁰ were born.

The origin of banks and their nature.

Banks have arisen as men have learned, by experience, that the three metals would not suffice for the great volume of trade, or for great empires, because a given quantity of gold, had become low in value compared to the prices of many goods, and had thus become most inconvenient to use, as well as risky to transport and trade. Thus, in accordance with different customs, provisions of different sorts have been made to fill the needs arising in this way. Wherever the government of a prince was just and people virtuous, it has occurred to them to represent money with some token which though without intrinsic value, was impossible, or at

least difficult, to counterfeit. But where tyranny and bad faith did not permit possession to be regarded as certain when a safe pledge for something valued was owned, it has become necessary to use some substance having an intrinsic value much greater than gold, compressing a high value into a small volume, such as gems.

Uses of gems in the Orient.

An example of this is found in the Orient. There, neither banks nor safe tradesmen exist, and gems are used as money. Their bank dealers correspond to our jewelers. They carry gems when they travel as we carry letters of exchange. It would be correct to say, therefore, that they use gems more as money than as ornaments, because they understand as true what I have shown in Book I: the greatest security is to be found in intrinsic value, and intrinsic price and value are attributed by men to the beauty of natural creations.

But, such a custom is only tolerable in a state as long as it does not involve the serious difficulty that a vast quantity of goods must be sent to a kingdom in which gems are found, in order to purchase them. And for this reason, it is a praiseworthy fruit of virtue that faith alone bestows value; it has transformed into precious money mere sheets of paper which are otherwise worthless.

Why private banks have gone into disuse.

The first banks were in the hands of private individuals who, as money was deposited with them, issued certificates of credit, and who undertook the same settlements that are made today by public banks. Since Italians, following their restoration, have not only been the originators and masters of every science, but also the masters and arbiters of trade, they were the depositories of money all over Europe and were called *Banchieri*.⁴⁻¹¹ To this day, the Lombard Streets of London and Paris are known as the meeting places of merchants; the square devoted to exchange in Amsterdam, is called *Piazza Lombarda*; and Venetians, Genovese, and Florentines are known by such a name. But, because in those unhappy centuries men knew neither the correct road to travel, nor the means by which to render judgment on the actions of others by the rules of truth -- the Lombards conducted trade that was sometimes lawful, but many other times illicit. Thus, they were confused with usurers and were as a result persecuted, not only because they were wealthy, but also because they were regarded as evil.²⁻¹

History of the most fa-

There is no doubt that such banks were most useful and good as long as tradesmen found as much money there

mous banks.

as they wished without having to make usurious payments for it, and as long as money did not rest idly in the hands of those inexperienced at moving and trading it. Thus, men doubled the volume of money on the basis of faith and honesty, by the creation of an equal quantity of paper money, which did not involve incurring the cost of sending goods, such as the precious metals, to the Indies. But the tradesmen of those days were exposed to innumerable mishaps; not less because of ill fortune, as because of the wickedness of other men who were not as wealthy but were more powerful than they were. Consequently, they often lost their credit because of bankruptcy, and many remained very poor, while still holding useless bills of credit.⁴⁻¹² This is why the Venetian Republic was the first to institute a public bank and was later, in 1609, imitated by the city of Amsterdam and, still later, by Hamburg. In the reign of William, the third, in England,⁴⁻¹³ the royal treasury, which was called *Exchequer*⁴⁻¹⁴ began to be almost as useful as a public bank in which wealth that was formerly left in the care of jewelers was kept. At length, in 1716, John Law established the General Bank, in France, the tragic and singular consequences of which I will relate below. Banks were also instituted in many other states at about the same time, but these are less celebrated.

The form of the banks of Venice and Amsterdam.

The model of the banks of Venice, Amsterdam, and Hamburg is as follows. First, everyone is permitted to deposit money into the bank, for which the depositor is listed in a book as a creditor. Payment is then made simply by changing the name of the creditor in the book, which thus transfers control over the entry. In order to avoid changes in money and variations of prices it has been established that money will be accepted in accordance with the quantity of fine metal it contains. This is the source of differences in prices between current money and bank money, a disparity known as *agio di banco*. Once deposited, it is no longer legal to withdraw the money which may only be spent in the manner just explained, hence the expression *a good bank is one which does not pay*.⁴⁻¹⁵ A bank's utility rests on the ease with which it makes payments, without transportation and other risks. Moreover, it keeps money infinitely more safely than money could be kept in vaults in private homes. Notwithstanding such comforts, they are known by experience not to suffice to move men to give up their own money; and even the faith of the republic does not seem to be enough to allay the fears of the greedy. As a result,

men must be forced to deposit their money. This was accomplished by preventing them, with the authority of law, from being able to pay with letters of credit for all large merchandise transactions, and for every other large value, except for some modest sum, with money other than that of the bank. Thus, in commercial nations the necessity arose for a money which buyers would be forced to use, even more than gold and silver, and which sellers could not refuse. The banks were soon filled. The amount placed in the Bank of Venice is fixed at 5 million ducats; that in the Bank of Amsterdam, without a doubt, brought in almost 300 million florins (though just how much of it might actually be hidden there is unknown); that in Hamburg is likewise unknown. By ensuring the bank, making itself its guarantor, the republic has provided that it would not seek to recover that money which, because it did not exist in the bank, would be given by the republic. Since the republic, distinct from private individuals, is a chimerical entity, it cannot hope to do anything but convert the patrimony of private individuals into the needs of the public. Hence, without their being aware of it, private individuals are their own creditors. And this unawareness has made it possible for the money to be multiplied, representing with it more than 100 million florins, without having to unearth it. It is to be taken for granted that since merchants would not leave their deposits hidden, republics cared for their serious needs with the money of banks.²⁻² Thus, a large part of the gold deposited with them was withdrawn. In consequence, the nature of the bank's money has changed, and from a deposit has become a loan to the public, although a loan different than the *arrendamenti*,⁴⁻¹⁶ one that was free and without any interest yield. In addition, once money was deposited, the prohibition to export it was known to be harmful to trade. If it is true that a good bank is one which does not pay, it is also true that an accredited bank is one which is not unwilling to pay.²⁻³ This is why Venice created for itself a cash fund for the payment of specie which, so far from diminishing, has multiplied its wealth and assured the confidence of the people in the bank. In Holland, it became necessary to tolerate the stipulation of sales, and to tolerate payment of the credit of many tradesmen in specie, with a gain of eight per cent, the percentage by which true, present money exceeds paper money.

Form and quality of

England's exchequer, also referred to as the Royal Bank, is not like public banks, except insofar as it

the Exchequer of London.

certifies trade freely. But at its origin, it constituted a loan made by private individuals to the prince, and this is why it yields an income. However, as the date of payment is not always certain, these credit instruments are bought and sold at a larger or smaller value, depending on the probability that they will be redeemed. Trade is only believed to be unjust by the vulgar, who -- contrary to human and divine laws -- make it a practice to say what offends them. But if blame is wrongly assumed by trade, which converts the price of daring into gain, against every risk, making profitable a commodity that in itself is not so, then the government cannot fail to be blamed for allowing money to circulate, though its value is always uncertain and unknown. Because virtue, which is useful to a country, is rarely combined with avarice and adroitness in making profits, it happens (as it has in France) that the rewards of the virtuous works of soldiers are carried abroad by *agiateurs*⁴⁻¹⁷ who have not served their country.

History of the bank and the system of Law, in France.

France was devoid of banks of any sort until 1716, when one was instituted by John Law, a Scotsman, under the protection of the duke-regent. As this was the first step, and virtually the foundation of his system, which has been so thoroughly discussed around the world and which has certainly been one of the strangest creations of the human intellect, I believe it is not improper for me to say what I think of that system. My opinion has always been that the duke of Orleans was not party to the plans of John Law, a man of the rarest and most remarkable genius but one without virtue or religion. I believe, therefore, that Law has two systems. One was filled with many useful suggestions; this is the one he described to the duke and to all of France. The other was destined solely to satisfy his own greed, and this one was marked with passion in proportion as he had so long been poor and wretched.

Utility of the system.

It is not possible to dispute the fact that at the time of the death of Louis, the fourteenth, the money supply of France was exhausted and, even worse, the country was flooded with useless notes.⁴⁻¹⁸ If such notes had had a fixed or a certain price, trade would not have suffered any damage whatever. But as they were not less refused by sellers as traded by *agiateurs* at a great variety of prices, there arose a general lament against such paper which was then referred to as *billet d'État*.⁴⁻¹⁹ It was necessary, therefore, to retire it. Bankrupt, France would remain completely without any money and would be destroyed. The French could not be

paid with money, for the court had none. Thus, the state's notes⁴⁻²⁰ had to be converted into others, in which people had greater faith. A state which loses its money is like an artisan who becomes very poor and is forced to sell the instruments with which he practices his art. Such an artisan would be irrevocably ruined because he would not have money with which to acquire new tools, nor tools with which to work and earn money. Similarly, France could no longer have been restored with industry and peace because, without money, her industries were no longer active. As a result, enriching her with paper money which cost nothing in terms of goods, but which provided a means of reactivating and sustaining manufacturing, was the same as restoring all of the orders of the artisans to them. Only then would there be enough tranquility and time to revive the state.

This was the usefulness and beauty of Law's system. France had to rid itself of notes which had already lost the public's faith. She had to create new money in which people had enough faith, so that foreign silver and gold coins could be recalled. Only then, when France was sufficiently restored, would new paper have the same good fortune as the original paper had enjoyed.

How the Company and Bank of the Mississippi were formed.

To destroy the notes, they were first reduced, though not with an equal loss for all but rather with a distinction regulated according to the merit of different persons who, though serving the nation, remained its creditors, who had been paid with notes. This was a wise policy, one likely to please the public, since man is not consoled except by seeing others worse off than he is. Nor is the envy of others less likely to make us happier than our own prosperity, so filled are we with wickedness.

A debt of 200 million *lire*, in notes, still remained after the reduction. In order to consign even this residual to the flames, it was proposed that the value of all coins be augmented by one third. And since France, which is at least six times greater than our kingdom, and wealthier (she has more than 6 million *lire* in coins) the court's debt would, thus, certainly become extinct. But she could not avoid not being left excessively short of money. The General Bank established a fund of 1.2 million *scudi*, in 1,200 shares⁴⁻²¹ when it had such credit that her notes⁴⁻²² would not have been refused, even after money was drawn from the deposits placed with it; money would grow at a level possibly even more than in proportion to her trade; and, thus, nothing remained to be done to heal France's ills and

eliminate her debt, but maintain the bank's credit.

Every means was used for accrediting the notes of the bank.⁴⁻²³ They were made necessary by an order ruling that taxes to the court be paid only with these notes. They were, henceforth, traded actively. They were declared privileged over every other type of paper money and, very nearly, even over silver itself. Indeed, if this state of affairs had prevailed, the government of the duke of Orleans would not have enjoyed any more useful and glorious policy.

How Law abused the system.

But John Law could not be contented unless he had his own wealth and enormous acquisitions. Although he had brought with him paper money,²⁻⁴ he cared for nothing else than the increase of its value. Thus, not content that these were merely images of money, he wanted to make them more precious than money. It had not been difficult to deceive the regent and to persuade him that it was necessary to strengthen those rules, which were known to have been good. Therefore, in order to render the shares profitable and, hence, valuable, a trading company, full of shams and visions of trade, was created. The yield of the shares, which were not less numerous than they were sought after, made their price increase. In addition, war was declared against true money with a ferocity and an incredible cruelty; it was reduced, then increased in value, and then reduced again, in great and sudden steps; it was then banished from the realm. Still later, though its export was permitted, its import was prohibited. Finally, it was taken by force from its owners and exchanged for the bank's paper money, which had already been declared royal and incorporated into the Company of the Indies.

After so many changes and disorders, the notes⁴⁻²⁴ were found to be worth five per cent more than true money. The company's shares were found to be so desired that they appreciated in value by two thousand per cent. A remarkable course of events followed, one which does not deserve to be believed -- except that it did occur. For instance, a widow of Namur, who had a small reputation for extending services to officials in the country, found herself enriched by 60 million *lire*. The bank multiplied the notes until they came to a total of 2,700 million *lire*. Prices of goods apparently rose in proportion and, finally, all debts, taxes, and public revenues were extinguished and caused so many changes in the state of France that the year 1720 might be described as the Year of Jubilee, similar to the one the Hebrews had, though it was far-

more singular because it was unusual and less expected, and also because it occurred in a great kingdom. In the midst of so much disorder, it certainly filled the soul of John Law, who had acquired over 40 million *lire*, almost all in cash or in noble and royal landed estates.⁴⁻²⁵ As a consequence, on May 21, 1720, only two years after the System had begun, it experienced its first shock when its notes⁴⁻²⁶ were discredited and their volume reduced. On October 10, the notes were retired and abolished. In other words, in order to satisfy a debt of only 200 million *lire* in state notes, 2,700 million in bank notes were needed. Briefly, this is John Law's System, indeed a memorable event, which shows how much the ingenuity of one man, in the midst of a people furiously infatuated by anything that is new and incapable of seeing things calmly as they really are.

The abolition of the Bank and the ruin of the System.

Some considerations on the aforesaid.

Everyone will understand that the System was harmful because it was carried to extreme lengths. They will note that France found itself whole after such great events, only because the peasant did not suffer from the System, for the land and the fruits of the soil were favored by the System when it increased consumption and prices. They will see, finally, that for a kingdom to experience a change similar to the Jubilee, which was conceived by the wisdom of the Judaic legislators, was an event which deserved not to be emulated by other legislators because it was one which sometimes contains great and unique utility in itself.

The history of the Royal Bank of France merits a longer and more specific discussion. But, the limits of my work do not permit it, and I shall, therefore, terminate my discussion of the bank here, and turn instead to a discussion of public loans.

Loans are of various sorts. Some produce income, others do not. Those which yield an income are of two kinds: one exists in perpetuity, and the other just for life. Bank deposits, which are of the first type, are converted to public needs. These were discussed earlier. We call all of the others, which are income yielding, *arrendamenti*,⁴⁻²⁷ *fiscali*,⁴⁻²⁸ or *istrumentary*.⁴⁻²⁹ The name given to these in Rome is *luoghi di monte*⁴⁻³⁰ and *vacabili*.⁴⁻³¹ The French refer to them as *rentes sur l'Hôtel de ville*.^{4-32, 2-5} In fact, every principality refers to them by different names. Although properties, or capital, (which in many places are called *azioni*,⁴⁻³³ because of the right they give to interest payments) are, as I have said, interest bearing.⁴⁻³⁴ Even in trade they actually yield such

Other types of paper obligations arise out of the debts incurred by the prince.

an income with its probability of a known and certain value, and as a result, they are bought and sold almost like money.

Since such incomes have been permitted in our kingdom, they can be bound and encumbered with trusts,^{4-35,2-} mortgages,⁴⁻³⁶ and debts,⁴⁻³⁷ and their acquisition has become a longer and more difficult matter than the conversion of credit receipts. Whence, it has developed that the shares⁴⁻³⁸ of *arrendamenti* do not circulate as money. Indeed, because the excises assigned to payment of income on the money borrowed were ceded²⁻⁷ to creditors, *in solutum*, the *arrendamenti* have changed their value and have become so many societies and companies, alike in all respects, as far as form is concerned, to the companies of commercial nations; the sole difference being that the shareholders, which we call *consignatari* engaged not in trading, commerce and distant discoveries, but in administering, strictly, the earnings of income and making that portion of taxes assigned to them yield fruit.

Tontine, a variety of life income.

Among the loans which yield income for life, except for sufficiently well known *vacabili*, are *tontines*. These are the remarkable invention of Lorenzo Toni, of Naples, first proposed in France in 1653, but not actually made until after his death in 1689. This is their form. A monetary fund is established and divided into many shares or, as we say, *carate*. These are then restricted to just a few classes, so that each class contains, perhaps, a thousand. Those who have shares in a particular class divide the income of the entire capital of that class, gaining the share of their companions who die, until only one is left, who earns all the income of one class. On his death, the *tontine* becomes extinct, reverting to the benefit of the sovereign. Notes representing the *tontine*, however, do not circulate as money, any more than those of lotteries can.²⁻⁸ Therefore, I shall not dwell on this subject any further.

The origin of companies.

Companies⁴⁻³⁹ have been established principally for navigation and trade with the Indies, and in distant seas, which once were as lucrative as they were filled with perils, losses, and vast expenses. Their shares were often traded almost as money. Since companies in many nations have issued money, or paid off the debts of the sovereign, their nature has changed and in some places they have become similar to our *arrendamenti*.⁴⁻⁴⁰

Their form is always the same and can be understood from a description of those of the *Banco di San Giorgio* of Genoa, which can be described as the first of its kind, as they were, in fact, described by an old Floren-

tine writer in the following passage:

Since the *genovese* have made peace with the Venetians, he⁴⁻⁴¹ says, after that most important war which had taken place between them many years earlier, and since their republic was unable to satisfy those citizens who had lent it great sums of money, it granted them the income from customs. The republic wished each one to participate in the income from the principal sum, according to the amounts owed to him, in order that he might be entirely satisfied with his share of the whole. In order for them to be able to meet together, the palace above the customs house was consigned to them. These creditors then arranged among themselves a type of government, forming themselves into a council of one hundred²⁻⁹ to deliberate upon public matters, and a magistrature of eight citizens,²⁻¹⁰ which were placed over all the others. Their credit was divided into parts which they called *loughi*, and they named the whole organization *San Giorgio*. Once their government was constituted in this fashion, new needs occurred to the communes in the city, for which they turned for new help to *San Giorgio* which, because it was wealthy and well managed, was able to accommodate them. The commune, on the contrary, which had begun by conceding the customs, proceeded to concede some of its lands to them as a backing for the money they had. And so the matter proceeded, born of the needs of the commune and the services of *San Giorgio*, under whose management the commune placed the major part of the lands and the city under the *genovese* empire, which it governed and defended, and to which it sends its rectors each year for public support, no part of which the commune toils over. As a result of this, the citizens have withdrawn their loyalty from the commune, as a thing oppressed, and placed it in *San Giorgio*, as a thing which is well and fairly managed. This is how the easy and frequent changes of the state have come about, and why their loyalty shifts from some citi-

zen to foreigners. This is why, not San Giorgio but, the commune has changed governments. So that when the Fregosi and the Adorni fought over the principality, because the state of the commune was at issue, the greater part of the citizens turned aside, leaving the commune prey to the victor. Nor does the office of San Giorgio do otherwise than as when one has taken the state; it makes them pledge to observe its laws, which until now have not been altered. Indeed, these laws could not be altered except by a certain and dangerous rebellion, because the company has arms, money, and government on its side. A truly rare example, and a republic which philosophers have imagined a great deal about, but have never seen; they have never imagined seeing in the same circle, among the same citizens: liberty and tyranny, the civilized and the corrupted, life, justice and license; for that order alone maintains a city so full of old and venerable customs.

Many parts of the preceding description would conform very well to present-day companies, and principally to the East India Company of Amsterdam,⁴⁻⁴² which step by step has become a republic, more powerful and better governed, perhaps, than the one in which it was born.

Considerations on matters pertaining to the kingdom of Naples.

But now it is time that I restrict my discussion to my own country, principally concerning its banks; the conservation of which has for so long been achieved among us, which certainly does us the greatest honor. The author of the *Spirito delle Leggi* has stated that banks cannot be established in kingdoms that have a luxury trade, such as France, Spain, and other monarchies.

False ideas of the author of the *Spirito delle Leggi*.

To place them, he says, in a monarchy is to imagine money in one category and power in another. That is, to imagine that, on the one hand, there is the ability to have everything without having any power, and on the other, there is power with the ability to have nothing. In such a government, only the prince has possessed or has been able to possess a treasure. Whenever one has existed, as soon as it has become excessive, it has become the prince's treasure.

It seems so impossible to him that, although the prince could, he does not wish to usurp the wealth of his subjects.¹⁻³⁰ But if he had observed our country, he would have seen a kingdom which is certainly monarchical, one -- except for the barbarian kingdoms of the Orient -- like which there are probably no others in the world, in which the decrees of the sovereign are more revered and more readily obeyed.²⁻¹¹ This is a kingdom to which the protests of the parliament and clergy of France, which is also a monarchy, would appear seditious. Banking institutions would even be found to have existed here, since ancient times; maintaining themselves in such a flourishing state, and so full of wealth that, in view of how small the kingdom is, they are certainly immense. So much could the virtue of the ruler ensure the populace against the abuses of power.

As with human events spanning such a long period of time, however, some banks will also be found to have been unsound, with one even failing (albeit, not for such ugly causes) due to the plunder of ministers. Over so many different events, during which the needs of the Spanish monarchy were so great, when such frequent changes of government were taking place -- there were three changes in just half a century -- and, finally, in the last wars and in the misery of the plague, one would see that the government did not cause the public the slightest fear. It had no part, by any means, in the ill fortunes of any of the banks, nor was the money which the prince spread over the land considered more valuable than that of his lowest subjects.

This admirable introduction to the benefits of liberty under an absolute government is our greatest achievement. Although there may have been few and unusual instances of this, the author of the tragic events of the General Bank of France ought not to have drawn his universal consequences from such events which were, in fact, based on his own shortcomings, and declare such events to be due to the nature of monarchical government. Had he done this, he would not have composed a book full of maxims which would appear true only to eighteenth century Parisians.

The reasons our banks have been maintained.

The credit of our banks has been maintained, then, because the court has behaved almost as though it were not even aware of their existence. Their management is in the hands of the most honest individuals who, in properly regarding the care of the public welfare as a pious and devout work, have demonstrated a total and, I should say, almost miraculous disinterest. Money depo-

sited in them is kept religiously. And although the resulting immobility is harmful, failure of the banks would be even more harmful. The full advantages of both are not possible in a monarchy and it is, therefore, better for the money to be kept in banks.

And this is the difference between banks in a republic and banks in a monarchy. The former are capable of multiplying the quantity of money and of being of some assistance to the state. They are maintained by public faith and, for this reason, it is wise for the supreme power to be the guarantor of the money. Those in a monarchy are uniquely suited to the protecting of money and the facilitation of its proper circulation. It is made secure by the virtue of individuals, by the strictness of laws, by the maintenance of a mental aloofness on the part of the sovereign, and by the ready availability of the money which has been deposited and which should always be on hand for withdrawals. This is why I would properly regard, as an enemy of the state and of the public tranquility, anyone who dares propose (as some have) that the money be taken from the banks and placed back into circulation, even after the prince has guaranteed the bank's deposits.

*Excellence
of their
statutes.*

The rules of our banks, which are all most wise, deserve to be made known to the world, thus bringing great honor to Naples. I would have been happy to do this myself if it had been possible to include them in the confines of the present work. But this cannot be done. Part of these rules can be found in a statement made, not many years ago, in defense of a cashier of the bank,¹⁻³¹ a man who brings honor to his country and to legal prudence. The only improvements that can be made, in my judgment, are the following.

*Improvements
that we
might avail
ourselves
of.*

I. Everyone should join together practically as one. I suggest here that the credit of every bank should be freely accepted and paid in every other. II. All banks should check their cash positions at the same time, on some day not known before hand. Thus, no fraud attempted by any cashier, say a credit drawn by one bank on another, could be kept from being exposed. III. The number of notaries who are able to authenticate documents should be kept at a minimum so that each one's signature might be more readily known; and, hence, it would be more difficult for errors to be committed by *Pandettario*, i.e., those officials who are entrusted with the responsibility of determining the authenticity of certificates.⁴⁻⁴³ IV. In every city of considerable size in the kingdom, a notary should be selected from among those regarded as the most honorable. His autho-

rity, once he has been registered at the bank, would not be controversial and he would be chosen for the purpose of providing greater comfort to those who live in the provinces. If particular cities, such as Gallipoli or Foggia, should establish a bank, or if one of ours should be transferred to them, this, in my opinion, would not be harmful to them.

*The basis
for wide-
spread use
of banking
among us.*

It will seem extraordinary to strangers that the banks of Naples are so full of money when, unlike many others, they do not yield any income on money, and because their certificates are not legally required to be paid, as in Venice and Holland. But such a wonder ceases when it is noted that the character of its people inclines amazingly to bickering and refusals. Certificates of credit not only assure payment but, with certain establishments peculiar to us, assures title to them. Thus, what the power of law and the stimulus of gain does elsewhere is done among us by corrupt customs and bad faith. But it cannot be denied that forcing the banks to work for the extinction of quarrels has been a beautiful and judicious thing.

*What the
trade that
gives suste-
nance to
companies is.*

Since we do not have enough trade to sustain them, there are no trading companies among us. To many who envy the present state of the maritime powers, this lack of trade is foolishly attributed to a defect among us. But this commerce, as they understand it, is not the beginning of the greatness of those states. It is rather a populous land that makes a state strong; and a state which has more land and more subjects is greater. Power comes from nothing else than the source from which the Romans drew power, that is, from conquests and from the servitude of others. This is the trade of the English, Dutch, and French companies. Great conquests bring with them a good deal of land, abundant income and a large number of slaves. And since these are distant from us, we keep shouting, "Trade! Trade!" We should be saying, instead, "Armies! Military virtue!" Though their colonies seem small when measured on a map, they are almost as large as the whole kingdom of Naples.

*The error
which is
made by rea-
soning on
the basis of
Holland as
an example.*

I have known a man respected for his frankness in reasoning about political matters and for facts about all the princes of Europe. Once, after he measured the province of Holland and found it smaller than our Calabria, he suppressed a profound sigh in his breast and after a long silence, exclaimed, "Observe how much a handful of marshy and sandy dirt, inhabited by rabbits and frogs, is worth." All who heard him applauded. Meanwhile, others, moved by a more worthy curiosity,

wished to measure how much land all the colonies and establishments of Holland actually occupied: those in America, on the coast of Guinea, off the Cape, the Island of Ceylon, of Java, of Borneo, the Molucca Islands; and indeed, all of them. To these were added the lands of all those principal tributaries so joined to them as to be entirely dependent on them. They found that so many states, united to the Seven Provinces, were not smaller than France. Thus, the Low Countries of Holland are not the republic, but its market. The republic is spread over all the universe, and a large part of it lives perpetually on the same sea. He who will note that the growth of a state results from the sale of its native goods will value agriculture, not trade. And if he will then note how much of the goods native to the soil of Holland are consumed there, he will find that agriculture⁴⁻⁴⁴ is the mother of wealth. Following agriculture is fishing, the other source of goods and of wealth; and, finally, hunting, from which many nations, such as Muscovy draw a great income. All the rest is a minor matter.

How trade
can be in-
creased
among us.

Thus, commerce, of which we lament the loss, and for which we blame ourselves, would be reclaimed by us, by discovering in the Mediterranean some area full of whales, some streams of herrings, or some codfish beds. Then taking the Straits of Suez, we should go before the others to Arabia, and to India; the Molucca Islands would be ours along with Ceylon, Batavia, and the Cape.

How trade
can be in-
creased
among us.⁴⁻⁴⁵

I would not say that our commerce cannot be greatly improved, or that much is to be hoped for and much has already begun to be obtained from the presence of a judicious prince. But it is necessary to be persuaded that without augmenting agriculture (because we have no fishing or hunting) commerce is a spectre, a vanishing shadow. And although commerce and agriculture may be linked together in such a manner that each is an effect together with a cause of the other, agriculture -- to pursue the matter further -- is always found prior to trade. For, flourishing commerce arises out of an abundance of superfluous goods; and this comes from agriculture which is, in its turn, made by population; population arises from liberty; and liberty, finally, from a just government. We already have the last two and, in part, even population has grown. Why, then, do we not have a greater cultivation? This is because of our excises, which, though not excessive, weigh too heavily on the provinces compared to the capital. This is an old effect, albeit, one which grows less onerous each day. And the present government cannot be blamed if it is

not eliminated entirely. Indeed, it is remarkable that in just sixteen years such a great and rapid change has come about.¹⁻³² It would be an incredible and miraculous thing if this were not understood to be caused by a virtuous prince.

BOOK V

THE YIELD OF MONEY

INTRODUCTION

This is a difficult, serious, and treacherous subject for which my background is so deficient that could I have refrained from discussing it with honor I should have done so without hesitation.

Contracts, from which the yield of money arises, are so often a point of contention that one can neither approve of, nor condemn them without being reproached by those holding other views. Those who have acquired respect and fame by so contending regard any adversary with the same hostility as a soldier looks upon anyone who attempts to take either his money or his ration of bread from him; they avenge themselves with the same ferocity. In other words, such disputes have always been cruel and sanguinary.

As regards usury, I doubt that the true precepts of our divine religion, that of the ancient fathers and of the doctors, have been sufficiently well declared by more modern commentators because of the unhappiness that has prevailed throughout the ages. Nor have they even dutifully understood the edict of the supreme ruling pastor, deservedly venerable for the summary and supernatural wisdom with which he guides the flock committed to his care.

For this reason, I shall not hesitate to explore here some ideas that are now on my mind. I am not less prepared to state them better and defend them less emotionally -- as long as they are contradicted with Christian virtue -- than to abandon and even detest them should anyone who is able, profess them differently and according to truth.

CHAPTER 1

OF INTEREST AND USURY.

A brief
narration
of the
controversies on
usury.

Since ancient times, men of wealth have drawn fruits from money by means of various forms of contracts. At the same time, the poor have suffered from the greater part of such agreements, either from injustice or from sheer wickedness. And since it is proper for those who profit to bear the suffering of their neighbors in silence as, on the other hand, the outcries and clamor of those who suffer are always the loudest, all the centuries up to the fifteenth are filled with voices which are in agreement in censuring and detesting all income from money.

In the sixteenth century, with the discovery of the new Indies, the growth of the arts, of industry, of trade, and of money, the institution of rents on the states debts was used for the first time, by Francis, the first, the king of France.²⁻¹ This was imitated by other princes. At that time, with the destruction of the Jews, the cruelest usurers, and the institution of *monti di pietà*, usury was almost totally extinguished and the common populace had thus been calmed. At the same time, it was astonishing to see the sharpest minds emerge to protect and sustain usury, already dead by this time, and despite the fact that it had not been defended by anyone even when it was alive.

Claudio Salmasio,⁴⁻¹ whose reading and talents have perhaps not been surpassed (though he made little use of his gifts)²⁻² was the first to treat the subject of usury exhaustively and with no less doctrine than the inclination to justify it.

He was followed by Nicolo Broedersen,⁴⁻² Canon of the Church, at Utrecht, and others.

A very great number of writers from all lands opposed them. In past years, the controversy was ignited anew in Italy, where Scipione Maffei,⁴⁻³ of Verona, wrote *Dell'impiego del danaro*.⁴⁻⁴ Because his noble and generous mind, his idea of virtue, and his wisdom²⁻³ were all deservedly established and, thus, made it clear that he was not inspired by passion or by any particular point of view, the book aroused great sympathy in the minds of many.

He was opposed by Daniello Concina^{2-4, 4-5} of The Order of Preachers with two books, the first of which was printed in Naples. Full of fervor and incredible fire, the books were as little expected as one would have expected to see great tranquility among men who were friends and learned scholars, subject to the same principles.

But the disputes were interrupted by the wise council of the supreme powers, who understood that those who have reasoned so much about the sin of usury, have not ordinarily had the providential faculty of being able to practice it, while those who have been capable of succumbing to it, have not understood the controversies because of the sort of education they have received.

One cannot deny that reason is, for the most part, on the side of Concina, though his adversaries have many plausible, if specious, reasons in their favor. I myself am persuaded that when the truth is practically divided between two opposing sentences, inclining no more to one view than the other, then either deceptive language or some outright error is involved. But as the truth is bathed in more and more light, it quickly reveals its own origin, as well as its connection with all other truths; it so thoroughly blackens any falsehood, that it is impossible not to see it. Thus, on reexamining the question, I have fallen upon those things which seem to me to have led to many disputes. I shall expose these as best I know how.

Over many centuries of ignorance, men have been so terrorized by chance events⁴⁻⁶ and by sheer luck that they have fled from them in fear, as from an untamed, kicking horse from whom they would flee with fright, seeking refuge out of reach. The light of true science has led them, finally, to the discovery that nothing is less fortuitous than chance events. Such events have a constant order and a controlled rule, such that it is possible to find a proportional relationship between the certainty of the present and the uncertainty of the future. Thus, as he quieted

The source of the obscurity surrounding the question.

The false judgments of the ancients concerning chance.

his fear, little by little, man began to familiarize himself with the idea of luck, to manage and manipulate it. For the first time, one hears discussions concerning justice in games of pure chance. Though previously scorned, in the hands of Bernoulli, the art of forecasting becomes a branch of mathematics and of truth:

From games, men proceeded to more serious matters such as navigation, human longevity, and the harvests of the fields, all for so long the butt of chance. These were measured, valued, and insured, against the wiles of fortune, placing human prudence in reins and in chains. It was now understood that intrinsic value always varies according to the degrees of probability, which might or might not be enjoyed from a thing.⁴⁻⁷ It was understood, moreover, that 100 future ducats with 100 degrees of probability of not being lost and 10 degrees of being lost, become 90 present ducats and should be valued as 90 ducats for any contract,⁴⁻⁸ game, or exchange. Thus, according to mathematicians, many conventions were put straight again, and the justice which the darkness of false science had expelled was recalled. In the face of chance, human daring was calculated and restricted between certain and stable limits.

Exchange and interest.

Thus the related concepts of exchange and interest came into being. One is the equalization of money here, with money which is spatially distant, by means of an apparent surplus⁴⁻⁹ which is added sometimes to present money and sometimes to distant money, in order to render the intrinsic value of one equal to the intrinsic value of the other, diminished by any reduction in convenience or increase in risk of one over the other.

Interest is the same thing, but between present money and money which is temporally distant, time operating in the same way as distance. The foundation of one contract and the other is the equalization of true intrinsic value. This is so true that, sometimes, in exchange, present money is worth less than distant money, and the exchange is said to be below par. Moreover, paper representing money, which is in any case nothing but future money, often has a value greater than cash. And this excess is called an *agio*.

The source of errors of Broedersen.

I will now reveal how all the errors in the opinion of Nicolo Broedersen arose from false ideas and the poor use of words; and how all the suggestion of truth which is inherent in them is concealed in ill conceived truth. It was in error, for example, to call

what is actually the reimbursement of a deficiency, placed there in order to achieve an equality, the profit⁴⁻¹⁰ from money. Every profit, large or small, made with money, is by nature barren and is reprehensible. It is even incorrect to speak of it as the fruits of labor, because work is done by borrowers, not by lenders. But, where there is equality, there is no gain; and where intrinsic price is altered and reduced by risk and discomfort, one cannot speak of a profit necessary to restore equality. Hence, it is erroneous and loathsome for him and his followers to find a disparity between the poor and the rich, and to confuse justice with compassion. Justice can reasonably be demanded of and claimed alike by the richer and happier as by the more unfortunate. Injustice cannot be claimed by anyone. Neither can he who gives up his rights to others, intervene to correct the dispositions of Providence and to divide misery and affluence differently, given the utter ineffectiveness of his work and the fact that poverty is more frequently generated by vice than by misery.

The error of some theologians regarding the explanation of some definitions.

On the other hand, many theologians who have properly defined usury on the one hand, and lending, on the other, have then poorly understood their own definitions. Usury is that profit received which is over and above the risk involved in a loan contract. This is a most just definition. Whoever would change it (as many recent non-Catholics have) and say that a loan which is not interest-free is not a loan at all, so that its yield is not usurious, is dealing with a play on words no less impious than if it were devoid of utility. Because for God there is no art nor the means of ordering what for man is not necessary. So many different formulae have been invented for the purpose of avoiding laws against usury, that it is truly superfluous and intolerable to want even to begin to insult and disturb the internal understanding of what is just. The definition of a loan⁴⁻¹¹ is also very just, consisting of the *consignment of a thing with the understanding of recovering only the equivalent and no more*. But the idea of *equivalent*, which in Latin is rendered by the word *tantundem*, should be improved and clarified. Value is the proportion which things have to our needs. Those things are equal which bring equal comfort to those with respect to whom they are said to be equivalent. Whoever searches for equality elsewhere follows other principles, wishing to find it either in weight alone or in similarity of appearance, shows himself to be of little intelli-

gence regarding human affairs. Many times a sheet of paper is equivalent to money, from which it differs both in weight and appearance. But, on the other hand, many times two coins, equal in both weight and goodness and similar in appearance are not equal. When a foreign coin is not permitted to circulate in a place, despite the fact that it is good (as Roman silver coins among us) then having such a piece of useless metal, which is refused by all, is not equally as convenient as having some other piece which is similar and is traded freely. This is why less is paid for money which is forbidden; it should be valued for as much as it brings when it is not refused, that is, for the intrinsic value of its metal, which is a kind of exchange that is very just and reasonable. After all, it is certain that among men, only pleasure has a price; but only conveniences are purchased. And since one cannot feel pleasure without others feeling discomfort and trouble, one does not pay but for the harm and deprivation of pleasure brought to others. To keep one's heart throbbing is painful; it is, therefore, necessary to pay him. Thus, what is referred to as the fruits of money is, when it is legitimate, nothing but the price of heartbeats. Who thinks otherwise is mistaken.

Explanation of the Bull of Benedict, the fourteenth.²⁻⁵

If now, the teachings of Pope Benedict, the fourteenth, are applied with the principles shown here, they will be found to be marvelously full of truth and wisdom. If human operations not scorned by the populace are observed, they will be found to conform to the above maxims.

Four principal doctrines in the Bull, which begin with the words *Vix pervenit*, are taught to the faithful. The first declares that lending involves the restitution of an equivalent and that usury is the gain over and above that equivalent. Whence is concluded: *omne propterea hujusmodi lucrum, quod sortem superet, illicitum, et usurarium est.*⁴⁻¹² A true precept. But the apparent and ideal increase should not be called profit,¹⁻³³ which it appears to be from the selection of an undervalued price by the general public.

II. With good reason, every gain, be it large or small, is condemned as sinful and reprehensible, since *the base and foundations of human contracts is equality*. In III, it is said that this surplus⁴⁻¹³ is not intrinsic to the loan; and, indeed, a truer thing could not be said. On the contrary, it is as different as are infinitely different the degrees of probability of loss. This difference is sometimes very large (as in

maritime usury), at other times falls to zero (as it is in banks and companies of the republic), and at still others, is below zero, falling to negative quantities (as in France at the time of Law's system). It is declared in IV., that one cannot find a reason in every loan to take a surplus over equal weight of the metals. This is again a sentence that is no less true than it is evident. But if the opposite were true, banks of the republic would not be found to be full of unfruitful money; what is more, no one would have been content to keep his money deposited in such banks without profit, refusing to place it in the hands of private individuals to fructify. Nor is it worth saying that the banks are for deposits, for it is known that those in Holland and Venice have altered their nature from banks of deposit to lending banks; albeit, making loans which for their greater safety are deservedly unprofitable.

Two queries which concern the heart of the question.

If I could continue to sustain myself in this logic, I would be surpassing my appropriate limits. Yet, if what I have said should cause any doubts and difficulties in the minds of any, it could be debated vigorously elsewhere. I only request of those who might wish to oppose me, that they attack me on it forthwith and not with a false hostility, created and armed at their pleasure. It would be wise to resolve the following questions before any others, in order not to stray from the heart of this argument.

In every state in which restitution of an equivalent is always measured with the equality of weight of metal and without any other consideration, it is certain that loans would be difficult and most rare. Now, if in order to induce people to lend, a company of wealthy merchants were formed for the purpose of insuring those who lend, by means of a certain percentage paid by those who borrow, would such insurance be licit or illicit? With the resolution of this question, another would have to be resolved. If a lender, not caring about the security of others, should collect the insurance for himself, would the nature of the contract be changed and would the contract be changed from being just to being sinful?

Means for rendering usury moderate.

I come now to a discussion of interest¹⁻³⁴ insofar as it concerns the art of governing. In this regard, it is manifestly desirable that interest, whether just or not, should generally be collected from among people under any title whatever, as small or moderate as possible. Here I have united together both good and bad contracts, because the redress of wrongs with the fear

of hell alone, or by an appeal to reverence of religion, is no part of politics: to consign everything to pity would be ridiculous and foolish. Morality guides men only after improving them and making them virtuous; politics must still regard them as tainted and covered with their ordinary passions. For this reason, it is appropriate for the prince to make provisions to the end that even the wicked usurer would not be able to be grossly usurious when lending, should he wish to be. It is always more laudable to prevent such occurrences than to punish them.

To reduce interest according to that shown above, it is sufficient to prevent a monopoly of money and to ensure its restitution. It has not only been the abundance of precious metals which has reduced and virtually eliminated usury in the past two centuries, but also, and principally, the mildness of government enjoyed in every realm. Conflicts have been shortlived, justice certain, the industry and frugality of the people abundant, and all the wealthy inclined to lend. Where there are a multitude of lenders, the conditions of lending cannot be hard and, thus, the poor will be treated without cruelty.

Why the yield of money cannot be fixed by law.

It follows from the same principles that the yield of money cannot be fixed by law and kept always within certain limits. If the yield remains in that proportion to capital as the probability of loss to the probability of recovery, then an infinity of circumstances must determine the yield of money⁴⁻¹⁴ or, what it may more properly be called, the price of insurance.

But John Locke has discoursed upon such matters at great length in his treatise, and I refer the reader to that. For though it is still in the original English, I do not doubt that it will some day be translated into a language which is more common among us.⁴⁻¹⁵

It cannot even be varied by the law.

Finally, it appears that the value of interest cannot be varied by law, raising and lowering it at pleasure, but that this must be done by nature itself, and that it could be maintained regardless of changes of the state and of customs in a realm. And since, when the law conflicts with nature, as in the matter of contracts, for example, in which the law is transgressed, where a law involving interest is made contrary to the times, one can hope neither for the establishment of a country nor for its sustained health.

The best way to reduce interest is to make the return on the debts of the state as small as possible.⁴⁻¹⁶ It is around this subject that I wish to direct the discussion of the chapter which follows.

CHAPTER 2

OF THE DEBTS OF THE STATE AND OF THEIR UTILITY.

*The origin
of public
debts.*

For scarcely more than two centuries now, princes have followed the practice of raising money from private individuals in order to deal with the necessities of war. To induce such persons to give money more willingly, the money was made to yield then a return and, accordingly, a portion of the revenue from tariffs was set aside to provide an income which they were to divide among themselves. But inasmuch as, until this time, there had not been enough virtue on the part of the prince or faith on the part of his subjects — and, therefore, there was no hope of expecting them willingly to confide in their own sovereign — persecution of Jewish and Italian merchants who lent at usurious rates was the common way of raising funds. Statesmen have argued at length to determine whether such revenues, or debts of the state as they are called, are profitable or harmful. I believe the reason for these differences of opinion is the dim knowledge men have had of the nature of the revenues. Consequently, once this is explained, it will be easier to judge this question.

*Their true
nature.*

The prince is a person who represents all of his subjects. The subjects, in turn, can be said, in a manner of speaking, to live, work, and sustain themselves through the prince. Since it is impossible for the prince to be his own debtor, then neither can he really be the debtor of his own subjects. His wealth consists of contributions exacted from citizens according to their expenditures. And, therefore, whenever he spends money lent to him, the prince is at the same time returning it to his subjects.

In the history of the ancient republics, one frequently reads of examples of citizens who have even competed with each other to contribute their own property

to fill the public treasury. But such examples are not seen today, now that men no longer idolize nation and liberty like a divinity, when they are taught to believe that the true fatherland and eternal liberty are elsewhere.

As a result, men lend money as needs arise; it is then either returned to them or they are paid interest on it. In either case the money is raised by means of a new duty. Thus, it is clear that the circuit returns where it begins, that is, it turns back into itself. This is why a loan made with new money collected from those who lend, is no different than if the loan had not been made at all. True, the duty is not levied directly on only those who lend. But it is also true that the union of a society lies in such a citizenry that wherever the weight is placed, it either bears on every part of the society or it pulls at and draws asunder, the part of the society on which it is hung, when it is not tenaciously enough attached to all to be sustained. The society is like a man who is equally prevented from leaping by a weight, whether the weight strikes him at his feet or on his head or arms, or whether it should just come in contact with his clothes -- it will either tear them apart or his whole body will be damaged by it.

Hence, the true benefits of public debt are: I. the weight of a large sum, raised all at one time, is distributed over many years over which peace and tranquility may be enjoyed; II. it is useful for trade and for contracts, on which insurance on state debt⁴⁻¹ is always desirable; these are much more secure, and more certain of income than land; III. churches, hospitals, *monti* and many other charitable institutions should only be enriched by similar incomes, incomes which do not require the care and concern of a loving and attentive manager, and incomes which are secure from poor administration and not exposed to hazards of fertility and disease. Indeed, since charitable institutions contribute to the public welfare, it is only just that they be supported by duties.

But if the evils of public debt are not greater than its advantages, then they are surely equal to them. First, state debt encourages indolence among the wealthy, who are too inclined to find shelter in it; state debt oppresses the poor to an almost intolerable degree. Nor can there be greater discord in a state than taxes (the payment of which causes the peasants great pain and sorrow) which put those who are already comfortably off out to pasture, without toil and worry. II. State

The utility of public debts.

Evils of income from public debt.

debts are harmful to agriculture because: the price of land is reduced, compared to the price of debt, which is more valuable because of the greater facility and certainty of yield; and because the wealthy do not purchase farms which, as a consequence, remain in the hands of miserable peasants, farms whose cultivation is thus deprived of the support of the wealthy. A country which is divided into innumerable fragmentary plots of land owned by the poorest people, is always more poorly cultivated than one in which farmers -- paid in kind by the wealthy owners of vast holdings -- do not run the risks of poor harvests.

The greatest harm from public debts comes from the quality of creditors.

Of the many possible difficulties of debt, however, the greatest arises when the state incurs debt after suffering the disastrous effects of prolonged and grave warfare. As its subjects find themselves without money, loans are, for the most part, made from the people of neighboring states or, at best, from those who, in the midst of universal misery, are thus personally enriched. So manifestly is the state in grave danger when it is in debt to strangers that the question requires no further discussion. The abbé de St. Pierre was, as a result, regarded as an enemy of France, and his proposal as bad council, when he suggested that the government of France create new income based on *l'Hôtel de ville*, which he praised highly, while neglecting to point out that it would have been acquired partly by the Dutch and partly by those same financiers whom he had already called the blood suckers of France.

CHAPTER 3

OF THE SATISFACTION OF DEBTS AND OF WEALTH.

*Examination
of the ques-
tion which
concerns the
money with
which payment
of a sum
agreed to is
to be made.*

The brevity of the present chapter must be astonishing to the reader in view of the difficulty and length of this subject, which reaches back into antiquity. The question here involved is: with what amount of money should debts be repaid? Should they be repaid with the same nominal amount of money that was originally involved in the debt, even if such an amount no longer weighs the same as the money lent? Or should the debt be repaid with an equal quantity of metal?

Some have treated this question in terms of the king's positive laws which differ from place to place and from one time to another. Others have treated it according to the teachings of reason and natural justice. One of these methods is not within my level of competence; the other does not appeal to me. A discussion of the different laws of princes regarding the effects of an augmentation of money is a work more worthy of jurisconsults; it is not for me, and I leave it for them to deal with. To seek to know what reason teaches would shame me should I appear to want to, or if I should seek it out. The augmentation of the value of money is an affront committed upon nature which is rendered necessary by state calamities. In some ways, it can be said to be a play on words, a fraud committed on the mind, in order to render the necessary payment of state debts more tolerable to the public. What light of reason, then can one expect to find where nature is attacked and subverted? Such a quest requires an understanding of the augmentation of money.

*The repay-
ment of an
equal weight*

Moreover, most writers permit themselves to be led to say that the restitution of the same weight is in conformity with natural justice, that the subjects of

of metal is not always an equivalent.

the prince are not required either to imitate or to obey him in this regard. But if they believe that by restitution of metal of the same weight they will always maintain that equality which is the soul of all contracts, then they deceive themselves. Because the intrinsic value of money varies virtually as much as does its extrinsic value, and all equality is thus destroyed. To see this, assume that a loan of one hundred pounds of silver was made in our kingdom a century ago. If the loan were repaid today with the same one hundred pounds, then not the equivalent but barely two-thirds of the amount contracted for would be repaid. For today, silver is surely worth one-third less than it was then, or, in more popular terms, goods have become dearer by one-third. Nor is it believed that any better equality is found in the barter of things for things, because the intrinsic price of each thing changes in one hundred years.

Population and the income from feifs must either increase or decrease. The price of house rents changes as the number of inhabitants of a city changes; and the prices of things produced on farms vary according to the variation of fashions, customs, and the arts. Finally, so great is the instability of human things that in one hundred years, a given thing is no longer the same in value and in the price given for it. If an ancient exchange, considered to be just at that time, should be viewed again one hundred years later, a great deterioration will be found to have taken place in it. Time renders the just unjust and transforms justice into injustice. Consequently, what natural equality can one hope to find in contracts? What vain and ridiculous conservation of wealth? If the change in the extrinsic value of money does not reduce it, then the abundance of the metal and the change in its domestic price⁴⁻¹ will.

It is not possible to agree not to remain *facto Principis*.

Bold and foolish, therefore, is the enterprise of subjects to wish to contract not to have to remain *facto Principis* with regard to money. The validity of contracts depends exclusively on the sovereign. Now, how can one have recourse to the prince, who sustains and causes to be followed that which has been agreed to against his wishes? Such confusion and obscurity in the laws, and such insolence in the people subject to them, has resulted from the refusal of princes to make their own laws, and from their having permitted their ministers to venerate as laws the opinions and interpretations of their own subjects.

CHAPTER 4

OF THE RATE OF EXCHANGE AND OF AGIO.

The word *cambio* denotes the exchange of one money for another, either here or at some remove. Because there are many varieties²⁻¹ of such trades, there are many different types of exchanges, each of which requires a specific and distinct definition.

First of all, one can exchange a coin which is actually on hand, which I call present, for another which is also present, but which is either of a different metal or one which comes from a different principality. On the other hand, one can exchange a coin which is present for one which is at some other place, whether it is of a similar species of money or not. Thus, I must discuss four different exchanges.

Natural exchange.

Among us, exchange of coins made of one metal for those made of another is conducted by persons engaged in such transactions, called *bancherotti* or *cagnacavalli*.⁴⁻¹ The rule for this exchange is no less the proportion of the legal price given to the coins, than the proportion of the intrinsic value of the precious metals in the coins, increased by a small profit for the exchange dealer in order that he may live and sustain himself. Finally, one must note the greater convenience of transporting the precious metals over copper, which is called *alagio*, a corruption of *agio*, which is a premium⁴⁻² enjoyed by precious coins. In other words, whoever brings such coins to an exchange dealer receives a premium, or an *alagio* for them, instead of paying the dealer something for his trouble.

Some may doubt that the natural value, as opposed to the statutes of the prince, can enter separately into the computation of the value of the two coins, when exchange takes place between two subjects of the same prince. But it is a certainty, a general truth, that

should one obtain, when he asks it of others, something which is not ordained by law, it is just that it be paid to him. Thus, since the law is not able to constrain anyone from exchanging, then either one who is exchanging will not be found, or it would not be possible to give up a coin which is not as good and acquire one which is better, and which when melted down would be worth more than was paid for it.

Likewise, for exchange between coins of different princes, even when they are of the same metal, which it is customary to make within the confines of a single state -- when the money of one state is not allowed to circulate in the other. The rule for this is intrinsic value, that is, the quantity of metal in the two coins, without which one state could sometimes dry up all the money of the other. These exchanges are called natural, or pure, and sometimes even retail.⁴⁻³

Commercial
exchange.

But, more frequently, the permutation of present money with money which is not present is what is called exchange. This is the *transfer of a credit which one man extends to another by means of a note called a letter of exchange*. Hence, a true mercantile exchange presupposes three persons: a debtor, a creditor, and one to whom the credit is extended. When instead of three persons there are actually just two, the exchange becomes fictitious.⁴⁻⁴ This is made either to indicate a debt by means of a letter of exchange in order to enjoy some prerogatives which this obligatory paper has been granted by the law, or it may be done in order to conceal a usurious loan, in which case it is called dry exchange.⁴⁻⁵

Explanation
of the na-
ture of
exchange.

To return to a discussion of true exchange, it is clear, first of all, that exchange cannot be given without credit. Thus, a place in which there are many large offers of letters must be a creditor to others. Therefore, in order to understand the principles and the causes from which the frequent change of the price of exchange derives, that is, of that apparent surplus⁴⁻⁶ added to an equal weight of the two metals, either present or at some remove (which is also called absolute exchange)⁴⁻⁷ it suffices to reflect on the nature of exchange, and the principles immediately become obvious.

Exchange is the acquisition of a given sum of money from abroad, without it having been transported there, but which is obtained by having it relinquished by whom ever possessed it there. It is, thus, said to *circulate*. All the excess over the equivalent weight of metal which is paid to the one who draws it, must not exceed the transportation cost plus the cost of all degrees of risk

to which the metal transported, but not the bill of exchange, is submitted. This is the ultimate limit of the price of exchanges over which they cannot remain with stability, or for any length of time, even if sometimes some unexpected movement might have drawn them there.

A just end occurs when this exchange is regulated by the weight of good metal which is contained in the respective coins. This is referred to as *exchange at par*.⁴⁻⁸ It is said to be below par at such times and for the same reasons that cause the price of any commodity to fall. A low price results from the existence of many sellers and from their desire to sell in haste. Thus, when merchants in a given place have much credit in their favor which they are eager to recover in money, as the presentation of claims becomes more advantageous to those who present them rather than to those who receive them and pay them out in cash, conditions become more beneficial to those who are exchanging them and more profitable to those who receive them.

Exchange favorable to bankers results, therefore, from the poverty and decadence of a state. When, on the contrary, it is lower, so much the greater must the credits of a country with its neighbors be. Since these credits can only originate from the goods sold to them there, it follows that exportation is clearly better. This is why the prince need not be concerned with the profit made from exchange, as much because the entire state does not gain or lose from it -- since it leaves the hands of one subject and goes into those of another -- as because if, small as it is, it hurts the sellers,²⁻² it need not be regretted by those who love the prosperity of the state. Consequently, those writers who raise a great clamor over it, show themselves to be more concerned over commerce, it perhaps having been their trade,⁴⁻⁹ than about the good of their countrymen. Indeed, the judgments which are heeded with the most deference by the wealthy, who are devoted to money, are like those of a man who, in order to have a large number of fruit bearing trees on his vast, paternal estate volunteers to resolve any differences of opinion on the nutrition of the plants and on their internal structure.¹⁻³⁵

The benefit
of being
warned of a
change in
the rate of
exchange.

But, if exchange is not worthy of the sovereign's attention, insofar as it is a cause of great things, it is all the more so as an effect and a sign of greater events, since it can justly be considered the pulse of the civil body of the society. And in order to test it well, it behooves him to have two concerns. One is

to watch always the totality of exchanges in his realm; the other to determine whether the effective money enters or leaves in an insensible stream through imperceptible channels, without passing through the banking circuit. It is harmful for a state to have high exchanges relative to all mercantile markets. But, if it has a low one relative to any single state, then it is necessary to determine whether this might not be true relative to all others. Thus, anyone in the markets of Naples who should fail to pay any attention to the trade which we might have with Sicily, and to the money which comes from there, would deceive himself in judging our present state. Second, it is customary for a country whose exchange rates are extremely high not to impoverish itself. This is what happened to us when the exchange with Rome was twenty-two ducats higher than 130, which was then par. It seemed we would soon become exhausted of all money; but such an effect was not seen to follow. The reason for this was not because there was a very great trade between the province of Abruzzi and the Papal States, so much as because, since the Roman fields were worked by the *abruzzesi*, it could be said that Rome was largely nourished by the Abruzzi. As a result, every peasant that returned from the kingdom took with him several *zecchini* which he had saved and, therefore, without letters of exchange and without any overflowing occurring in its banks and in its market place, the kingdom restored itself. Then, in the fairs of Foggia, which is virtually our heart, the money absorbed used to return and restrengthen it.

Agio and
its nature.

I wish to conclude, here, this discussion of exchange, for it seems to me that for me to attempt to demonstrate further every one of its circumstances would not be in conformity with my subject, which is not meant to provide instruction for men engaged in trade.

Equally briefly, I shall say something of *agio* which is "that disparity between one coin and another due to a premium."⁴⁻¹⁰ Thus, the money of the Bank of Venice is -- for reasons of security and because it is more necessary to trade than ready cash -- valued with an *agio*. This renders it more dear than cash. The difference between cash and paper⁴⁻¹¹ is also called an *agio*, because their intrinsic value is diminished either for fear of imminent bankruptcies or of reductions. This was the case of the trade carried on in France, in discredited notes, as it generally is when poor and discredited money circulates together with good money:⁴⁻¹² all long for one and refuse the other, and with its loss rid themselves of it.

CONCLUSION OF THE WORK

As I consider whether I have, even partly, fulfilled my duty to write something useful for the human race, I feel so much joy in my soul that, whatever the result of the work may be, I have been amply rewarded for having done it. For, if this is no longer a time to worship one's nation, it is surely a time to love it, to stand ready to defend it, and to venerate it. But it pains and distresses me that while the kingdoms of Naples and Sicily are rousing themselves and recovering with the help of their own sovereigns, the rest of Italy fails in insensible degrees from day to day, and declines. Although the signs of this decline are many, the greatest is, in my opinion, the endless discussion and the innumerable quantity and types of improvements, laws, and institutions on government and trade, and on all the orders of the civil state -- all so universally sought and competitively pursued. As in our older men, great ideas and a continuous, breathless pursuit, born of internal anguish and organic deterioration, are always indices of an imminent and irreversable end. And this, to me, is why it no longer seems possible to uphold the words of our ancient poet:

*That the ancient valor
In Italian hearts is not yet dead;*⁴⁻¹

but at the same time, I doubt that, finally, given peace, it will be necessary to say that:

*Italy has become old and inclined to barbarism.*⁴⁻²

This ends Book Five and concludes *On Money*.

APPENDIX ONE

GALIANI NOTES TO THE SECOND EDITION

[The order in which Galiani's notes are presented here does not always conform to the order in which they originally appeared in the 1780 edition; the notes now follow the same numerical sequence as the pages of the text. Consequently, a few notes have a different number than they had in that edition. However, I have attempted to indicate all changes in footnotes, to enable interested readers to recapture Galiani's original numbers. In no case have Galiani's ideas been altered.

Tr.]

See 1-1,
page

NOTE I

An examination of this book will quickly reveal that my resolve was to cite by name as few as possible of the writers with whom I differed, for it is not individuals that one opposes but ideas. Moreover, I could foresee that if it had become known that it was I who was the author, many would have been astounded to discover such a youth so lacking in respect for such venerated names. They would have readily concluded that I would not have been able to complete such a task as this properly. Indeed, our nature is so inclined that it always seeks causes to persuade us which are completely opposite to the intrinsic reasons of things. Now that I am no longer young, (or as Correggio⁴⁻¹ has said, "Now that I, too, am a painter,") I can say without any misgivings that many writers whom I had in mind to criticize for having written on money awkwardly and poorly can, nevertheless, be discovered and cited as though they were authorities on the subject. I refer here, particularly, to Bernardo Davanzati and to the abbé de St. Pierre. Davanzati's *Lezione accademica sulle monete*, a book printed in quarto, in Florentine prose, and written at the beginning of the last century in the Florentine vulgate (without doubt, the most disagreeable of all Italian dialects) substantiated the well known axiom that "*corruptio optimi est pessima*."⁴⁻² And his teachings are no better than his style.

The abbé de St. Pierre, Ireneo du Castel, also wrote on money. He had in mind only the successes of Law's famous system. His works, a complete edition of which were published in Holland in 1743, were reproduced anew in Italy, where they were received enthusiastically because of the high repute in which the author was held there and because he was indeed of a mind which could be described as honest and good. But, unfortunately, what is in the mind is rarely related to what one has in his heart (as demonstrated by Niccolo Macchiavelli, among others). The value of his work has now been re-

duced to its proper level by Cardinal di Fleury, who has referred to it as "les reveries d'un homme de bien;"⁴⁻³ and such, in fact, it is.

NOTE II

See 1-2,
page

The treatises of John Locke, written in English, on *the interest of money, and on money*,⁴⁻⁴ appeared before Melon's *Saggio del commercio*; but I have cited them second, because I do not regard them as highly. In 1750 when I published⁴⁻⁵ this work, these treatises had not been translated into any other language. However, they were printed in Italian, in 1751, in Florence, by my learned friends Giovanni Francesco Pagnini and Angelo Tavanti, in two volumes, *in quarto*, by Andrea Bonducci. The Florentine translators added their own notes, reflections, comments, and clarifications. In addition, they revised the whole text, dividing it into chapters and into sections; thus, placing the material into some order. Despite their labors, the work has remained impossibly obscure. Actually, I myself had done the translation in 1744,⁴⁻⁶ in order to enhance my understanding of English, but I failed to publish it immediately because I was aware of the displeasure its disorder and lack of continuity would bring to its readers, in view of the form in which the author had originally composed the book. Moreover, since I had never adopted many of his principles and teachings, I concluded that I would be obliged to add many notes and qualifications. I, therefore, decided that my time would be better spent in the preparation of the present work, which would include only my own thoughts.

NOTE III

See 1-3,
page 3.

This phrase alludes to the refusal of all help and council from all others, which I had voluntarily elected to do in order to maintain my anonymity as the writer. I wish to reveal here, once and for all, that at that time, in order to conceal my identity, it appeared convenient for me to pretend that the author of the book was a serious man, one of mature years who had known controversy and, one who -- motivated by ill fortune -- had grown to regard a world he understood only too well, as tedious. This fiction, this innocent mischief, was worth just so much to me, since nothing appeared more useful for the encouragement of the book's approval and

the elimination of all speculation concerning the identity of its author. In the absence of this note, one would not know the reason for certain statements appearing throughout the book, especially that at the end of Chapter 4, Book II, which did not suit me at all at that time, and which the Lord would not wish me ever to agree with in the few remaining years of my life.

NOTE IV

See 1-4,
page 9.

These few periods contain the briefest summary of a book over which I labored until my eighteenth year but which, because it was superior to my virtually boyish powers, was not completed. It was to have been entitled *Dell'antichissima storia delle navigazioni nel mediterraneo*, a subject which has been discussed, and treated exhaustively, though never as completely as I would like to have treated it.

Abandoning all allegorical systems, whether they be physical or moral, chemical or astronomical, through which it was hoped to discern an ancient mythology and Greek history, and which -- except for just a few -- are all but attempts and amusements of luxuriant talents; and not relying too much on the not too secure guidance of etymology, I took advantage of the singular likeness between the history of modern voyages to new lands, of Columbus and Vasco da Gama, and the history of ancient Greece. I was persuaded that history is nothing but a repetition of similar events, and I thought I saw many historical truths in which Greek mythology was believed to be fanciful and mendacious. I shall give a few examples of this here.

The serpent which slew Laocoon and his seven children is in no way legendary. It is that great, frightening snake which is still found on the Island of Sunda and in the interior of Africa, which wraps itself around any animal it takes by surprise and then crushes and devours it.

The animal which frightened the horses of Hyppolytus was a sea lion, sometimes called a sea cow, or lamantin, which frequently came on land, where the presence of many men failed to frighten it.

Then there are sirens, those aquatic birds called penguins, which now abound off the Magellan coast, and which from afar resemble unclothed women who have just emerged from the water.

In addition to these, there are harpies, also aqua-

tic birds and quite voracious, who build their nests on deserted reefs, in large numbers, which virtually renders them inaccessible to man.

Our seas also contained whales and sea monsters in those days, and there were also cannibals on land and, perhaps, also great Patagonians.⁴⁻⁷ There were also tigers, lions, and snakes. The white man (nature's conqueror) routed and destroyed them all. And when none were seen in our region anymore, the story of the ancient world began to seem apocryphal and fabled. But the easy subversions and frequent translations of the growing colonies are similar to ancient mythology and the modern history of voyages. Study and observations to assure them of the healthy air and fertile land in their founding on unknown soil, were the beginning of the haruxpex and of Etruscan wishes. Wars with the indigenous savages and the trade done with them contemporaneously resemble history in one and in the other. Preference given to the meaner isles, in order to establish colonies, while avoiding the terra firma which was more subject to surprises by savages and other brutal peoples who were without ships, is just like a similar ancient history experienced by the Phoenecian and American peoples. Ambrosia and nectar is the sweet food and the liquid spirits brought to the European savages, who do not become excessively gluttonous and who regard them as the food and drink of the gods, for they called the more cultivated people who were from the Orient, and who civilized and conquered them, gods. Orpheus is a missionary who came from Egypt to give the first ideas of religious worship to the savages; he lost his life there.

I will stop here. The development and demonstration of what I am alluding to should be much more than just a simple note. Who knows? Some day I may finish this book. I must confess, without guile, that it was not filled with many things which would be new or unsaid by others. But to reunite them into a single idea, to form them, virtually into a systematic story, a unique and, at the same time, likely story, purged of the flights of fancy of wise men — would, perhaps, be a new and useful thing.

NOTE V

To demonstrate that in the days of the Trojan Wars the word *ecatombe* already denoted the sacrifices of lambs and goats, it seems to me sufficient to relate

See 1-5,
page 10.

two passages from Homer. In the first book of The *Iliad*, verse 65:

... whether it is for some vow that we have broken, or hecatomb that we have not offered, and whether he will accept the savour of lambs and goats without blemish, so as to take away the plague from us.

And in the same book, narrating the restitution of Criseide to his father and the sacrifices of slaughter, by the Greeks, he says, in expiation:

Then they offered hecatombs of bulls and goats without blemish on the sea shore, and the smoke with the savour of their sacrifice rose curling up towards heaven.⁴⁻⁸

That the number of animals sacrificed to slaughter at that time was more than one, can easily be shown from other verses of the poet, and from the small size of Ulysses vessels, on which a sacrifice was transported, and by many other arguments which I gathered in a dissertation entitled *Stato della moneta ai tempi della guerra Trojana per quanto ritraesi dal Poema di Omero*. This was read in the *Accademia degli Emuli*, in 1748, but it has never seen the light of publication since it always seemed to me to be an excessively immature work. I will, nevertheless, conserve it among my papers, embellished by a note in the border which the immortal Mazzocchi has deigned to include, in his own hand, and which, for this reason alone, is dear to me.

NOTE VI

The population of the realm at that time was generally believed to be 2.4 million souls, or more; but Bartolommeo Intieri estimated it at, at least, 3.2 million, and he was not in error. For this reason, I calculated the consumption of grain at that time to be 15 million *tumoli*, for our people consume a great deal of bread and macaroni, and are carnivorous to only a small degree. For other nations, it may be estimated at no more than three and one-half *tumoli* per person, annually, although it is universally believed to be a good deal greater. The population of the kingdom has grown steadily since then, and it now exceeds 4.5 million, while the consumption of grain has risen to more than 20 mil-

See 1-6,
page 35.

lion *tumoli*. But as cultivation has increased, proportionately, some excess of grain could still exist, and not just in the most fertile years, but also in those of mediocre fertility. It is, therefore, less than it was at first. Hence, the ready price increases with every easing of trade. Hence, the frequent alarm, and easier monopolization, and the fear, whether justified or imagined, so true is it that grain is the only important type of trade for poor and unpopulated nations. Neither would anyone oppose my opinion that actual cultivation has increased -- not by little but by leaps and bounds, which is obvious in a great part of the kingdom. For this reason, I speak here not of cultivation, in general, but only of that which concerns grain. Now, if one will reflect on the fact that the greatest progress in cultivation among us has consisted of joining fields⁴⁻⁹ which from the outset were sown in what we call *schrubs*, he would understand that, although a field now has products of great value, such as those which it gives besides grain, wine, and the timbers from small shrubs -- it now produces less grain than formerly. Similarly, plantations of mulberry trees, which have grown immensely, as well as olive groves, hemp and, from today onward, tobacco, all are cultivations which limit that of grain. Consequently, I believe it is not wrong to say that grain has only grown proportionately.

It is true that the soil of the kingdom of Naples would yield a greater product than it does today, if the plains and seashore were put into cultivation, thus reducing the greater part of the wretched and paludal pastures. But neither the lassitude of the people nor the negligence of the government are to blame for this. These are the reasons, according to the gossip of fools and the publications of travelers at full gallop, who wish to appear to be vigilant observers. The blame belongs, instead, to unfortunate, ancient legislation, which has reduced these lands -- either to a point at which they cannot be owned by private individuals, making them instead state property; or for having introduced certain rights on them (resulting in their not being closed, husbanded, and cultivated well), rights which had formerly been of some comfort to the poor. The government is now fearful of adopting laws which would appear to violate the ancient rights of citizens. What glorious timidity. It falls to the wise to predispose minds by persuasion *praeparare vias Domini*.⁴⁻¹⁰ The law must come after persuasion and understanding, which the populace must have for its greatest advantage

and this disenchantment requires a long time, indeed, sometimes many, many generations.

NOTE VII

See 1-7,
page 36.

Until the year 1750, the year in which this book was written,⁴⁻¹¹ the price of grain in the provinces was under ten *carlini*, in good years, and was regarded as dear if it rose to thirteen *carlini*. Now prices are considerably changed, and the price of grain is between twelve and fourteen *carlini* in fertile years, between seventeen and nineteen in years of normal production. The most extraordinarily poor harvest of 1763 caused this considerable alteration to begin.

NOTE VIII

See 1-8,
page 75.

Everything in this chapter and in those which follow, concerning imaginary money or money of account, is meant to refute a work by Carlo Broggia, in which money of account was completely exalted and in which it was proposed that it be introduced among us. Hence, our ducat, with which we always enumerate, would not, even today, be an imaginary money, now that none of this coin is any longer minted.

NOTE IX

See 1-9,
page 76.

There even still exists in the registry of the Chancellery of King Charles, the first, for the year 1274, letter 13 folio 2, the diploma with which this remuneration is assigned, on the basis of the customs at Naples, to Brother Thomas Aquinas. This is reported in a learned book entitled *Storia dello studio di Napoli*, by Gian Guiseppe Origlia, printed in 1753 in one volume of 142 pages. But here it is necessary for me to caution that if I valued the golden *uncia* given as remuneration to St. Thomas, as corresponding to six ducats, this would be to combine into a single expression, in order to make all variations easily understood, what has happened to the value of money among us from that time to the present. Only the weight of an *uncia* has not changed; everything else has. The ducat was a gold coin worth a sixth part of an *uncia*. But it is no longer the same; it is now barely a third part of what it was then: that is, it is now equiva-

lent to an eighteenth part of an *uncia*. The proportion between silver and gold is changed to the degree that, whereas it was then little more than ten to one, it is now fifteen to one. Finally, the greater abundance (and hence the depreciation of the precious metals) has become so great since the discovery of America that, according to the researches I have been able to do on it, the quantity of gold among us has tripled and that of silver has quadrupled. As a result, I have evaluated the remuneration of St. Thomas at seventy ducats a month, actually, or a little less. Such a large salary does not cause any wonder, nor is it believed to have been extraordinary and granted only on the basis of his complete and singular doctrine. For, we know from the same registers that in those times Giovanni di Casa Miczola (from the village located on the isle of Ishia) a professor of medicine, received twenty once annually, and that the professor of Canon Law received twenty-five. In those days teachers of the sciences were highly valued. Due to their scarcity they were only available at a high recompense, and were sometimes even invited to distant lands.

Concluding, I would say that from what has already been said, above, it appears to me today to be the moral equivalent between actual money and the gold *once* in the days of Charles, the first, that in the *ad hoc* Chapter is treated as the measure of the gravity of punishments for theft. That is, a theft of under one *augustale*⁴⁻¹² is punishable by flogging and expulsion from the province; one between an *augustale* and the *uncia*, by the amputation of a hand; and one from an *uncia* on, with death. Those who are now involved in the examination of this proportion, a research heretofore neglected and one not undertaken by any of the ancient jurists, commentators, and glossators of the law, will reach conclusions close to mine, the conclusions which I have just come to here. That is, according to my conclusions the *uncia* should be valued today at fifty-four, perhaps even sixty ducats, and the *augustale* at a one-fourth part of this. I trust that my opinion is at least the object and end of their learned research, and is either confirmed, or opposed and refuted.

ADDITION TO NOTE IX

In his *Cronica*, Riccardo, of San Germano, reports that in December of the year 1231 gold *augustali* were coined in the mints of Brindisi and Messina; and in subsequent years he reports that they were given the value

of one-fourth of an ounce. Our writers have repeated this: an example is Afflitto, commenting on the constitution *Quicumque mulierem*; Summonte, and Vergara are others, and finally all. I was of the same opinion when Note IX was printed. But inasmuch as some doubts have arisen in my mind, I have wanted to examine the exact weight of an *augustale*, since many of them exist in museums and many, which have come to me for viewing, have been found underground. I have chosen for examination one that has been perfectly preserved, which comes from the plentiful museum of Monsignore Calefati, the Bishop of Potenza, a man of very select doctrine and virtuous mind, and of fine customs, who is a singular friend to me. I have found that this coin weighs just six *trappesi*, or one-fifth of an ounce. It has little alloy, which, because it is of silver and not of copper, makes the gold pale and discolored. From this testing, I have induced myself to believe that there are errors in the *Cronica* of Riccardo; and I am all the more persuaded of it because, as I have noted, the text is incorrect and, perhaps, even vitiated, to the degree that even in the date, one reads 1222, where he should read 1232. The incorrect text by Riccardo has led all the others into error. Afflitto adds an anachronism to it, saying that the *augustale* has been valued at fifteen *carlini*, not minding that *carlini* were only coined beginning in about 1266. The silver coins of Frederic, the second, were called *tarini*, a word brought to us from Sicily, where they are still found.

NOTE X

See 1-10,
page 78.

This idea of mine (on the method to follow in order to find a fixed and universal value) seemed obscure to many readers, and it was, in fact, to me as well, as the tenor of my statement indicates. Nor would I have said "perhaps it shall be found" if I had already found it. I could only dimly see, as in a haze, that this fixed value was to be found in man himself, and in his relationships to other men. Since then, I have constantly thought about the solution to this problem.

I have understood that to regulate oneself on the price of slaves (as it then seemed to me it could be done) is not satisfactory.⁴⁻¹³ A better guide would be the income of soldiers, but this is not a secure guide either because they have been treated and esteemed differently by different nations at different

times. Besides, what confuses the calculation is that what is paid to soldiers or workers, regardless of their skill or trade, is all paid in money; and, therefore, it appears it may have to be determined in the following manner.

First, reduce to a money value all that a man needs to live on. Then determine the lowest and poorest level to which the income of a poor man can be reduced, just enough to barely keep him alive.⁴⁻¹⁴ A sum reduced to these terms will be the fixed and constant value which will give an idea of the proportions of wealth and of the state of money in every century, and in all nations, because it explains the proportion that man, -- in a physical sense, is devoid of every moral value and calculated, virtually as a beast who assigns no value to beauty or intellect (as is given for horses or for hunting dogs) but simply, as a beast of burden has to the rest of society. This ratio of value is always, obviously constant, and it has always been so, at all times and places.

To explain myself more clearly: today, in Naples, I estimate that if everything a man and his wife, with no children, needed and received were valued purely in money terms, they would not be able to live on less than eight ducats a month; in the marches of Ancona they could, perhaps, live on five Roman *scudi*; in Paris they could not live on less than seventy *lire*, nor in London on less than one hundred shillings. In other words, eight ducats, in Naples, in 1780 is the equivalent of five *scudi* in the marches of Ancona, or seventy *lire* in Paris, or one hundred shillings in London.

This is the moral equivalence which, though it would vary a great deal in name and in the number of coins with every slight change of time and place, would, in itself, always be constant. The cash equivalence, on the other hand, which is always regulated solely by the weight of metal, seems immutable, because it will always be certain that five *tari*, neapolitan, current, weigh as much as four *lire* and three *soldi* in France. But the equivalence of every small variation of the wealth or poverty of a place, or of annual happiness or misery would always be variable. To know cash proportions is helpful only to merchants in regulating exchanges. But moral proportion would be the only one which would help historians and legislators. And this has been neglected to the degree that only in recent years have the erudite begun to do any researches on it.

I believe, therefore, that instead of seeking the value of a single commodity, even one which is regarded

as a primary necessity, because none exists which is of constant necessity, it is necessary to look for what is of the multitudes and is similar to all the primary necessities of a man, a lot less variable value. But the manner of reducing to calculation all the absolute, precise needs of man, and to evaluate them in money, is more difficult and intriguing than at first it appears to be. I think that many would be surprised at my having said that the totality of the needs of a married man, in Naples today, cannot be valued at less than eight ducats a month, since they believe that many live on less. To whom, I pray only to caution before they hasten to condemn me, that I must reduce into money, and include in the calculations, even the probability of any help which the poor get from public or private charities, and of any fortuitous profits. That this calculation is not far removed from the truth is confirmed by how much has been said in Chapter 1, Book IV, page 207, of this opus.

It suffices for me to have indicated my own thinking here, a little more clearly and after more mature consideration. It is for others to perfect or refute it.

NOTE XI

See 1-11,
page 86.

Guiliano Passaro, a silk merchant, though a man of no literary cultivation, was a man of sublime ingenuity. His *Cronica*, a most curious work, which covers the years to 1524, still remains in manuscript form because of our neglect. Of all those I have read until now, he is the only author who makes mention of the calamity of cheap provisions, and he has appropriately deplored this. But truly, from the discovery of the Indies until now, the kingdom of Naples has been the only one which has tested the maxim among the misfortunes of a nation. That is, the loss to one's sovereign has occurred because, during the increase in the metals, while all Europe complained of the increase in the price of provisions, we alone felt the penury of money, and therefore the cheapening of every commodity. I shall transcribe here the very words with which this chronicler in his native dialect, treats this in the statute book conserved by my illustrious friend, the fiscal advisor to the crown, signor Don Ferdinando de Leon.

In this year, 1509 and 1510, there was such a great abundance of provisions in the king-

dom of Naples, such as grain, meat, wine, oil, almonds and everything, that no money whatever was to be found there. The realm was driven by many payments newly imposed by the officials of his highness, the Catholic king, and this caused the great poverty there was in the said realm. Think of it, a cart full of grain, on the coast of Puglia, was worth five ducats, but no money whatever was to be found for it there. In the flour market of Naples, moreover, a *cossina* of flour, that is, four *tumoli*, was worth seven or eight *carlini* per *cossina*; and a pig there, which weighed one *cantaro*, was available for twelve *carlini*: but none were found at any price -- because anyone who sold was unhappy about it.

For the proportion, that the *carlino* at that time had to the present, see the following note.

Those among us, today, who avidly long for low taxes and low prices, and who believe happiness of a people consists of these, should reflect on this case, and decide if it is desirable that we return to the state of things as they were in the year 1510.

NOTE XII

See 1-12,
page 88.

To demonstrate this considerable increase in the prices of provisions, or to state it better, to show the depreciation of the precious metals which continued for three centuries to the present, and produced nothing less than the greatest abundance of the metals made by the augmentation of money at various times -- I could cite infinite proofs and I could even refer the reader to the diligent labors of some learned men from other lands, who after the first publication of this book, have applied themselves to researches of such events in their own nations. But it will be more pleasant to my readers for me to indicate some of them here. In the *Prattica della mercatura* of Giovanni Antonio da Uzzano, of Florence, written in 1442, and published in 1765 by Sr. Pagnini, in chapter 53 of the third book of his *Trattato della decima, mercatura, e moneta de' Fiorentini*, he states that in the years of communal harvest there were purchased, at wholesale, in Puglia, "100 *salme*, that is, 800 *tomboli* (which we call *tumoli*) of grain for 25 or 27, and up to 30 *once*, and were sold

at retail, for 1 *carlino* the *tombolo*, or thereabouts." This can be read in the printed work; but it is all too clear that there is either an error in the manuscript on which the edition is based, or the editor is in error, where it reads *carlino* for the word which should actually read *tarino*. It is certain that among us the *carlino* has always been the sixtieth part of an *oncia*, and the *tarino* has always been worth two *carlini*. Now what Uzzano says at first does not follow; namely, that the *salma* of 800 *tumoli* was worth between 25 and 30 *once*, or that the *tumolo* was worth 1 *carlino*, since 800 *carlini* make not more than 13 1/3 *once*. But reading it as *tarini* makes better sense for an average between 25 and 30 *once*. Regarding the gold weight of the *carlino* in those days, we know this exactly from the *Relazione delle diverse qualità di monete costrutte nella Regia Zecca di Napoli cominciando dal 1442 fino al 1629*, expanded by order of the *Collaterale* and conserved for us, and published, in his *Discorsi sopra le monete del Regno di Napoli*, by Giovanni Donato Turbolo, master of the mint. In this we read:

In the year 1442, when the most serene Alfonso, the first, of Aragon, ruled over this realm, the royal mint coined *carlini* of the old days introduced at the time of the most serene King Charles, the first, of Angio (after whose name these coins are called *carlino*) and the mint used to pay a pound of these ducats, in silver, 8.3.5 and one-half, and every *carlino* weighed four *trapesi* and one and one-half *acini*, and used to be the price of ten *grana*.

The *carlini*, which were minted under Charles, the second, and Philip, the fifth, and which circulate today, weighed two *trapesi* and six *acini* with an alloy somewhat better than that of the old. Thus, ignoring trifles, one may say that the *carlino* in the time of Alfonso was worth as much as eighteen actual *grana*, and the *tarino* was worth, as a consequence, thirty-six *grana*, which multiplied by four, make fourteen and one-half *carlini*, and this is precisely the price of the *grana* in the years of communal harvest, along the shores of Puglia.

From the same Giovanni Antonio da Uzzano we know that two and one-half casks of wine, of Maddaloni, of twenty-four *cogna* to the cask, used to be worth thirty *carlini*. That is to say, every cask sold for such a

weight of silver as today goes into about twenty-two current *carlini*, which multiplied by four give about nine ducats, and which today is generally the price of wine of that quality. But I am not as certain of this second calculation as I am of the first. For, just as surely as the *tumolo* measure from the time of Alfonso, to date, has not varied, the cask measure which Uzzano knew did vary, because it varied from one part of the realm to another, and it could also have changed from then until now because it was not legally fixed by the mint. Moreover, the *cogna* (a corruption of the Latin word *congium*) has long since ceased to be the only measure of oil in all provinces.

From a document dealing with the price of grain of a communal harvest, I pass to one of the greatest shortages. From the manuscript of his chronical, Giuliano Passaro (cited above in Note XI) left the following note, going back to the year 1496:

At this time, there was a very great famine in Naples, where a *tumolo* of grain was worth nine *carlini*, and a *tumolo* of flour just ten. And this was a time of the worst rainfall, a rainfall which lasted for three months. It was a time when it was not possible to come to Naples by sea, and a time when the soil of Naples was not fertile; you may think that a similar time had never been heard of. But, as our Lord God wished, at the end of three months, the bad weather disappeared and fertile times began to come to Naples again.

At the time, nine *carlini* corresponded, in weight, to about sixteen of today, which, quadrupled, give a price of about six and one-half ducats the *tumolo*, such an excessive price in the kingdom the likes of which the memorable famine of 1764 barely provides another example. But that narrated by Passaro originated from sporadic causes, which rendered it peculiar and of much shorter duration, to that city alone.

This notice must be succeeded by another concerning low prices, left to us by the same Passaro. This was experienced during the great abundance enjoyed in 1510 (which I reported in Note XI). But I must remind you that already by that year, an immense quantity of precious metals had been brought here from recently discovered America. As this circulated in Europe, it changed the prices of goods a great deal, and led to the sale of a *tumolo* of flour, in Naples, for less than

two *carlini* of the variety minted by the *aragonesi*; and to the sale of thirty-six *tumoli* of grain, on the shores of Puglia, for fifty *carlini* -- such a depreciation as to produce the ruin of the cultivators, which indeed actually followed.

And that the calamity of the total penury of money, and, thus, that the depreciation of the prices of goods continued to vex the realm, is attested to by the fact that a century later, that is, in the year 1547, we have a letter from Monsignor Onorato Fascitelli (which has been inserted among the other memoirs of this man of letters by the learned and diligent Sr. Vincenzo Meola) written from the Torre Maggiore on Christmas Eve, to Sr. Giambattista Possevini, in which he says:

I found myself in Puglia trading grain for my customers and -- this will make your Highness laugh -- I sold many hundreds of it at eight and one-half grana the *tumolo*.

At that time the *carlini* of ten grana weighed an eighth less than those which were minted in the days of the *aragonesi*, since we know from the above cited report of our mint that, in the year 1542, minting began at a weight of three *trappesi* and ten and one-half *acini*. The *carlino*, then, at the time Fascitelli sold grain, was worth about sixteen grana, current; and the price at which it was sold should correspond, in weight of metal, to about fourteen grana, actual, which if multiplied by four should give a price of five and one-half *carlini*. This would be a low price, one which would make you laugh and which, given the great abundance of harvest and prohibition of exporting, would today reduce the quantity of grain of Puglia. And other documents even show that the difference between the prices of that year and those of today is more than threefold; whence, it is that Fascitelli does not come to sell his grain more than if, today, it were sold for less than five *carlini*. So much was the kingdom so thoroughly exhausted and impoverished of money, that it was found converted to an unhappy province of Spain!

And that from 1547 until now prices truly only tripled, seems to me evident from another document, which the diligence of the same Sr. Meola (of whose friendship I am singularly proud) has led me to discover. This is a little autographed chronicle, in manuscript, of a Don Geronimo de Spenis, a priest from a principal and wealthy family of Fratta Maggiore who wrote, curiously, in his native Neapolitan language, some notable events of

our city from 1543 until 1550, inserting among them some facts private to him, the greatest of which, in his opinion, was the first mass which he sang and the public supper which he gave to the entire village on this occasion (a residual of the ancient custom of *epulum populo datum*) and of the collection of offerings made by him at similar functions, according to custom. The prices of everything which was bought for the banquet have thus been handed down to us. The entire report is curious and conserves for us so many memorials of old customs today in disuse, that I do not know how to restrain myself from reporting it faithfully, in its entirety, though not all of it is useful for my purpose:

At the first monthly offering (*mensis*) of Sunday, August 1546, in Fratta, I, Don Geronimo, sang the first mass in the church of *Santo Sossio* at the main altar, with many and various singers, both secular and religious. Present were many persons from different places, cities, lands, hamlets, and chiefly from Naples, Marigliano, Aversa, Gugliano, Marano, Chiayano, Panecuocolo, Santantamo, Casandrino, Grummo, Casapozana, Orte, Pumigliano de Atella, Crispano, Frat-tapiccola, Cardito, Pumigliano ad Arcula, Santo Pietro ad Paterno, Casoria, Secondigliano, Arzano, Caserta, Capoderise, and everyone from Fratta. There was held there a great and indomitable feast with many different foods and beverages, with more and different musical instruments, triumphal arches, great towers, galleries, and other fireworks. (This feast was held at the home and in the courtyard of Agnello and Gabriele de Spenis; and because on the preceding Thursday in the said house of Agnello there had died and passed away from this present life one of her nieces, named Menechella de Spenis, who was married to Santillo de Catello, whose death cost me more than twenty *scudi* because everyone at the home, male as well as female, was unhappy over the death of this Menechella, and everything went a *sacco* and to ruin. Menechella had been ill for more than six months, always on the verge of death. Finally, all were invited, and cows as well as piglets were brought, as were many other

things, and it was not possible to delay any more; it was necessary to sing the mass and to have the said feast. I spent about eighty ducats for the feast, and gave not more than sixty, on which I lost more than twenty *scudi*, and from which in addition, more were stolen from me including: tablecloths, napkins, clay and wooden dishes, pots and pans, knives, carafes, glasses, whole piglets, and anything else that could be stolen.

There follows a note of the goods bought for the dinner and the prices paid for them; these are as follows:

First, for six beautiful <i>Jenche</i>	35.0.0
For small and large piglets	5.2.10
For forty geese (twenty-five purchased and the others from my own stock) I would say	2.2.17
For eleven ducklings	0.2.15
For sixty pullets	2.1.5
For 400 eggs	1.0.0
For one ham, <i>verrinia</i>	0.3.6
For eight pieces of cheese, thirty-six <i>cellese rotula</i> , and five <i>rotula</i> of <i>casocavallo</i> , plus tax	2.0.5
For eighty <i>rotula</i> of vermicelli	1.4.6
For ten <i>rotula</i> of rice	0.4.0
For some spices and sugar	2.0.0
For some fruits like apricots, nuts, peaches and pears, I would say	1.1.10
For melons, shown <i>de Ponte</i> at <i>selice</i>	0.4.0
For some ceiling lamps	0.1.10
For <i>provole</i> ⁴⁻¹⁵ of two kinds	0.1.0
For thirty-one <i>rotula</i> of lard	1.2.15
	58.1.19

Anyone who has experience with actual prices of provisions will easily see that the prices of this particular night are little more than the third part of current prices, including that of rice, which is, on the contrary, given here at a value greater than it actually was. Nor do I think that everything can be attributed to the small size of the harvest that there must have been in that year; but I believe, instead, the cause of it to be the small cultivation of it which was done.

Concluding the discussion, it is readily seen how true it is that, combining together the change in the value of money and the changed quantity of precious

metals, a *carlino* at the time of Alfonso, the first, was equal to seven *carlini* of today.

NOTE XIII

See 1-13,
page 101.

On this, my sentiment on the form and rule to maintain the continuous monetization of copper among us, it is not right for me to recount even the events which later encouraged me to support it. I wish, therefore, to hand down to posterity what I am now about to say, since no historian has, perhaps, related it and because it is appropriate to the glory of a good prince that history be the depository not only of the errors and mistakes in politics — which because of the weakness of human nature are so frequent — but also of repentance and retractions, that are no less glorious than rare.

In 1755 the king was induced to coin new copper money, of no greater weight than seven carats *per grano*. Old coins had been struck partly of twelve and partly of ten carats *per grano*. The reasonable resistance that the deputation of the city and the wisest magistrates made at that time to such pernicious council sought to attribute it to a lack of respect. But that just and wise king did not delay in perceiving the error, and all the monetization of copper was suspended, never to be considered again.

More than twenty years later when some projectors — believing, perhaps, that the events which occurred earlier had been erased from the memory of men — put forward the coining of new copper money, giving them an intrinsic value of seven *trappesi per grano*, and offering the prince a profit of two and as much as six ducats per hundred. The resistance that the zeal of the elected of the city and the magistrates presented was not minor; and the justice and sagacity of the sovereign, long a source of irritation to them, loudly applauded them this time.

But one must not remain silent about the public's great ignorance in matters involving money. For many are persuaded that in not accepting similar proposals, the sovereign has sacrificed one source of his profits to the good of his subjects. In fact, the matter is entirely the other way round. With the diminution of the intrinsic value of the coins (as I have demonstrated all through Book III) one, in fact, diminishes, albeit, not nominally, the income which the sovereign exacts; the excises which the public pays are lightened. Thus,

with the diminution of the intrinsic value of copper by a third, in a few years the king would in reality have lost, for the small and contemptible profit of a few thousand ducats, an income of 1.5 million ducats annually, not exactly because he would not have exacted the same sum in ducats that he now receives, but because, with everything becoming dearer, he would not have been able to provide for the same needs of the state with such a sum.

Some will ask how it has occurred that the public happens to be opposed to the lightening of their taxes. Though this may appear amazing at first, it is easily explained. The populace knows that if the sovereign reduces his income, he will be forced to impose new duties to replenish it. And just how much of a shock every new duty causes the entire state is not necessary to relate here.

NOTE XIV

See 1-14,
page 105.

The silver money which was minted in Naples, since the time of the new minting made by the marquis of Carpio, was of eleven ounces, pure, per pound. Minting proceeded on this basis until 1735, when we began to mint new coins with the imprint of *Sebeto* lying in view of *Vesuvius*, and the legend *De Socio Princeps*. These were of ten ounces and eighteen sterlings, just two sterling less than eleven ounces, despite the fact that the king had ordered with his dispatch, that these be minted of the same weight and purity as the old coins, changing only the mint mark.

On 6 October 1747, having made the usual tests, and finding the money to be of ten ounces and eighteen sterlings, the deputation protested and did not wish to release the money coined. A representation was made to the king under date of 7 October, exhibiting to him that, besides the harm to the subjects of such a change, there was that which according to the old contract for the production of new money, of fourteen grains to the pound, the tax farmer would gain an additional thirteen grains per pound, for the amount of two sterlings which were lacking, without any profit for the royal administration.

With the dispatch of 11 October 1747, the king concluded the question by ordering that the money be fabricated "*del mismo peso, y valor de la que corre, y se cuño en los años 1735 y 1736, majormente por averse en todas partes aumentado el valor de la plata.*"⁴⁻¹⁶ This

was a wise resolution, since the experiment of so many years has proved the equilibrium of our silver money with the gold and that of the copper. Moreover, silver has so increased in price since then that for some years since then coinage has ceased, inasmuch as contractors that could undertake it without damage and harm could not be found. We have silver coins in such abundance that no discomfort will be brought upon us, if we should go through yet many more years, without coining any more of them.

NOTE XV ⁴⁻¹⁷

See 1-15,
page 106.

With the proclamation published on November 27, 1749, the weight and goodness of the three new gold coins was declared by the sovereign. One was valued at six ducats, and was called an *oncia*; its weight was declared to be nine *trappesi* and seventeen and a half *acini*. Another was of four ducats. It was to be called a *doppia* and to weigh six *trappesi* and eleven and three-fourths *acini*. And, finally, one valued at two ducats was to be called *zecchino napoletano*, and to weigh three *trappesi* and five and a quarter *acini*. The goodness of all three coins was the same: twenty-one and three-fourths carats.

At virtually the same time, Sicilian gold coins were admitted to free circulation in the kingdom; these were called *onze* and were worth thirty *carlini*. Their goodness, according to an essay dealing with the subject, which was written by the deputation, on January 30, 1750, is also twenty-one and three-fourths carats, and they weighed four *trappesi* and nineteen *acini*.

From that time forward, Sicilian golden *onze* have become most plentiful among us, and, although that mint ceased coinage in 1758, they are still in abundance in the kingdom. Of the gold coins minted in our own mint, the abundance is not less, there being a value equal to 15,591,168 ducats, from the time minting began until the year 1773, and another 4,058,080 ducats, from the beginning of the year 1774 until June 11, 1778.

With such an abundance of gold, we have no longer had any need for foreign gold, which has actually vanished entirely from among us. Indeed, a little of our gold has begun to circulate in countries around us, and even in the Ottoman Levant. I have reported this news, taken faithfully from the mint's registers, with pleasure, because I could give no more certain proof of the increased opulence and happiness of the kingdom of Naples.

As for silver, a total of 4,609,828 ducats was minted among us, from 1747 to 1773, when further minting ceased. But silver coined in Sicily has begun to circulate among us in greater amounts. Before the year 1750, it did not circulate freely, nor did it enjoy legal acceptance.

These are the changes undergone by coins of precious metals in the last thirty years. But ready circulation and proper equilibrium among them has always remained the same, and forms one of the greatest and truest glories of the government.

NOTE XVI ⁴⁻¹⁸

See 1-16,
page 114.

As I have pointed out above, in order not to leave the identity of the author of the book entirely to be guessed, I have preferred to employ every art in order to have it regarded as the work of a man of advanced years. This is why I have written as though there has already been composed by me another book on the *Arte tutta del governo*,⁴⁻¹⁹ so that it would, in fact, have appeared impossible that a youth of twenty-one years had already completed two books. The fraud succeeded. It was not, however, all a lie. As young minds are inclined to enterprises much greater than their powers, which they know only too poorly how to measure, I had truly imagined writing on political science in its entirety and I had either to sketch out many parts of it roughly or to invent it altogether. The least imperfect was carried in this Book, and placed in the form of digressions, such as those on duties, luxury, and others. As to grain legislation, I have either written on it at other times or in other languages. Several other things remain among my papers, but not all the work has always been done by me. I have from it the immensity of work, the dangers of the truth, the flesh of flattery, the torment of reticence; but above all there emerges from it the saying of a truly great man, who, occupying the most sublime dignity, one day, wearied by his normal affairs, and confiding them to me said, "Believe me, Ferdinand, men do not desire, nor do they deserve to be governed." These words, which after many years still reverberate in my mind although they do not persuade me, have however always left me somewhat disturbed.

NOTE XVII

See 1-17,
page 122.

These are Melon's words:

What followed contradicted the entire report and exposed the inadequacy, or the bad faith -- or possibly both -- of the reporter (Pou-lain). However, he had a considerable reputation, and it was to him, on whose advice the decision would be made, that the minister sent the memoirs on money. The best minds were very careful not to become victims of such reputations. The legislature itself would have necessarily become the victim if it had not scrupulously examined the people it served. It maintained a grave and imposing household, always enveloped in mystery, a skillful exhibit of superficial knowledge, of the facile art of avoidance by silence (scorned by those who understood it), of interested and verbose (often even ignorant) preachers, whose voices were those of wealth and honors -- well or badly acquired by a successful covetousness -- all of which placed on the stage, personages whose masks had been drawn back too far for the welfare of the state.

NOTE XVIII

See 1-18,
page 126.

The history of our mint, that is, the narration of variations in the value of money in the kingdom of Naples, from the time of Frederick, the second, until now (since those who preceded the epoch of this grand prince either lacked memorials or only appeared to us through disorders, foulness, and abuses) should have been worthy of drawing out from among us, some writer whose mind was kindled by love of country, or, to put it better, who had a mind which was nourished by the applause of its citizens or the encouragement of its ruler. Undertaking it with scrupulous precision of calculations and comparisons appropriate to the material would not only be an extended undertaking but one which would, by far, surpass the limits of a note, and would, perhaps (if I am not remiss in judging the interests of my fellow citizens) tire me more than it would bring instruction or delight to my readers. In

general, while scorning every minute calculation arising either from small alterations of weight or alloys, or of the insensible but always progressive alteration of proportions which have existed between gold and silver, I come to a discussion of that gold coin, popularly called *Agostaro*, that is *augustale*, of Frederick, the second, which was coined with a weight of a fifth part of an ounce. Twelve *carlini* (the name of a silver coin first issued by Charles, the first, the Angevin) are equivalent to the *augustale*; so that one ounce of gold was worth sixty *carlini*. The ounce was never a coin but was only a unit of weight, which has not varied. Two *carlini* were equal to one *tarino*; but the mint did not coin money bigger than the *carlino*, which, having remained under the Angevin race with the smallest alterations of weight, under Alfonso, the first, of Aragon, was fixed at the weight of four *trappesi* and one and one-half *acini*. And so they remained until 1510, when under Ferdinand, the Catholic, they were reduced by one *acino*. Then, in measure as the proportion between gold and silver varied, they fell continuously. The diminution in their weight -- and the different valuation produced by the augmentation made in all silver money to the end of the last century -- was so much that the *carlini* were reduced to almost half the old ones. Meanwhile, as the proportion between silver and gold, which before the discovery of America and of the easier trade with the Indies was almost of one to eleven, rose to one to fifteen, and it followed that the *augustale*, which when it was coined was worth twelve of these *carlini* now corresponded to about forty-two current ones. The *scudo*, an ancient Angevin coin, which succeeded the *augustale*, was always the purest of gold coins, weighing five *trappesi*, that is, one-sixth of an ounce, and upon minting was made of a value of ten *carlini*; but at the beginning of the seventeenth century it was already worth eleven *carlini*, and it then increased in price to thirteen, without changing its weight or fineness, until the coinage of gold ceased in 1582. Coinage of silver commenced in 1596 at the weight of an *uncia* of three *trappesi* and eleven *acini* but, because of the lack of restraint of clippers, were soon spoiled and destroyed. After a time, almost the same sort of half ducats, called *cianfroni* were minted and, following in ever greater abundance, the coinage of *carlini*, and *tari*. These continued to be reduced all the more until, finally, in the year 1684, in which the marquis of Carpio resolved to strike ducats, that is *scudi*, no longer of gold, but in larger silver coins.

He made them of a weight of one ounce, one *trappeso* (which is a thirtieth part of an ounce) and fifteen *acini*, with an alloy of one-twelfth. This money still circulates among us, but it has become quite rare, and only its subdivisions are common, principally the *tari* and the *carlini* which today are worth twenty-six and thirteen *grana*. In 1688, all of these were raised by ten per cent and, subsequently, in 1691, by another twenty-two per cent, or by thirty-two per cent in all. But to avoid the smallest fractions, the *tari* and the *carlini* were raised by only thirty per cent. The ducats and their subdivisions, which the count of Santo Stefano had pressed, were found to be, with the said increase of 1691, raised by twenty per cent, and thus became pieces of twelve *carlini*; and the *carlini*, which were subdivisions of them, became twelve *grana*. From that time forward, money of twelve *carlini* has continued to be our largest silver coin, and coins equivalent to ten *carlini*, that is a ducat, have not been minted, except for a small amount stamped under Charles, the sixth, which because they were made of extra goodness, have been melted down by jewelers and have disappeared. In the meantime, keeping accounts in *carlini*, *tari*, and ducats developed; and sometimes they are held in once (an entirely ideal money, made equivalent to six actual ducats) *tari*, and *grana*. As for vellow coins, that is, coins of silver and copper, we have had these since William, the first, a Norman, or since 1622. Under the Swiss and under the second Angevin nation, they were most copious, and always indivisible companions of the epochs of our worst calamities.

Here is an idea, then, given in general terms, of the monetary events among us. From these it is seen that, having conserved the weight of an ounce of gold steadily, and steadily also the names of the ducat and the *carlini*, and changing their intrinsic value -- in four centuries an increase of more than double, with respect to silver and of triple with respect to gold, has taken place. So that the ounce of gold, valued by Charles, the first, at six ducats, is today worth eighteen, and even more, if the gold is very pure. Likewise, of silver, which he valued at thirteen, is some grains more. And this is with respect to the weight and to the relative value between the two noble metals. With respect, then, to the change between the value of the metals and that of victuals, and of every other merchandise, it seems to me I have discussed this enough in the twelfth note.

ADDITION TO NOTE XVIII

Meanwhile, I have not hesitated to correct the error in Note XVIII, to say that the *augustale* was one-fifth part of an ounce,⁴⁻¹⁹ it not seeming possible to me that Emperor Frederic might have wanted to give it an extrinsic value so exorbitant, and to value it at one-fourth, when it did not weigh more than one-fifth of an ounce. Had he done so, would it have been possible to sustain such a false valuation against the evidence?

NOTE XIX

See 1-19,
page 128.

Everything in this chapter on the disutility and on the harm to be feared from vellow money, is equally directed to refute the opinions of Broggia, who had proposed the reestablishment among us of money made in this fashion. The government had the wisdom to abhor such advice. In Rome, it was embraced, and events have proved how little it should have been welcomed. Under the papacy of Clement, the twelfth, such coins were made with the hope that they would remain in the state, inasmuch as the *giulj* and the ancient *paoli* had disappeared. But these old coins did not disappear because they were melted down. Instead, they passed into Tuscany because the gold and good silver and Tuscan coins were freely accepted in both states, but the Florentine and Roman *zecchini* had a different valuation with respect to silver in these two dominions. Thus, it paid to bring gold from Tuscany into Rome, and silver from Rome into Tuscany.

NOTE XX

See 1-20,
page 130.

There exists among our laws a chapter entitled *Perpensa deliberatione*, of Roberto,⁴⁻²⁰ in which the export of silver *carlini* from the kingdom is strictly prohibited. Foreign tradesmen, however, are not thus prohibited from removing silver money, obtained from the sale of goods brought to us, when they leave. The reason for settlements made in this manner, which at first seem thoroughly absurd and ridiculous, and which have not been illuminated by any of our ignorant glossators, must be due to an error in matters of money committed by the prince mentioned above. The *carlino* he minted, (one of which was shown to me by the marquis Giambatista Pedicini, a *beventano* gentleman in

whom are joined together a not ordinary growth of spirit and a singular courtesy) weighs four *trappesi* and ten *acini*, while that of two Charles' its predecessors, do not weigh more than four *trappesi* and five *acini*. This money being better and stronger, it follows that it should naturally come to pass that it was carried away by foreigners, who would leave bad money in exchange for it. As a result, the sovereign was aware of the necessity of prohibiting this exchange, taken by itself, but not, however, the exchange of goods with money. But the remedy believed to be given with such a prohibition was very badly conceived, and it remains ineffective. Because the prince was so devoid of wisdom, there was great unhappiness in these centuries. And others did not know any more than he did.

NOTE XXI

See 1-21,
page 140.

It pains my heart to keep silent concerning the negligence of some provincial magistrates, on the justice of well calculated prices *della voci* of grain, oil, silks and other goods. This has done, and still does, great harm to our trade, giving it the greatest and most pernicious shock which it has experienced in a long time. It has become necessary: to resort to new methods; to allow the great tribunals to reexamine the evaluations of the *voci*; to reform them; to lose time; to cause legal actions and lawsuits. Moreover, uncertainties and legal questions, on the meaning of contracts have arisen; controversies have arisen over the *voce* made and the reformed *voce*; doubts have arisen about how much of a *voce* and which one has been published. Thus, these have caused bad faith, new malaise, conflicts between lawyers and sellers, impediments, and ruin. There are those who, in view of so many dangers, have concluded that it would be just as well to abolish forever all *voci*. This council would have been precipitous at the time the present book was written; it will be useful when the opulence of the provinces and the wealth of the cultivators are joined to the extent they can be liberated from the necessity of a contract, which in substance is nothing else than the sale of ones goods in anticipation of later receipt of money payment, to which is added profit from uncertain interest payment.

NOTE XXII

See 1-22,
page 150.

I followed then the general opinions of all the antiquaries, excepting none, who have regarded sheathed money as the work of particular counterfeitors. The passion and taste which I have always had for the study of coins has, thus, caused an opinion to arise in my mind that sheathed coins have all also been minted by the public authority and that these have taken the place of coins of two metals, that is, of vellon. For example, when silver *consolari* and *imperiali* were full bodied silver coins, they were our *denari* or *quinari*; at this time the sheathed coins were the *sesterzi*. I cannot compress into the brief space of a note the arguments that move me to think this way; they should be the subject of a longer dissertation that would not be related to the objective of the present book. I will only say, here, that it is remarkable that wherever sheathed money was minted, there was no vellon money; and that vellon *imperiali* began under Gallieno, when sheathed money was no longer minted. I shall caution, in addition, that what I have said in this book, following the opinions of others, is not true; namely, that the relief of coins has been reduced to redress the frauds of sheathed money. The pleasure of coining money with an embossed relief which is slight, is observed to have begun in Rome while it was still a republic, and in the Etruscan medals of Capua and of some neighboring places; it is also observed to be equally in use for silver and copper coins. The greatest number of sheathed coins are found exactly among *consolari*, which are of low relief; while in the coins which are in highest relief and among the heaviest silver coins of Sicily, Athens, and of other places, no sheathed money is found, just as one never finds sheathed coins of gold. This is the greatest argument that this is not caused by counterfeitors.

Nor is it a lesser argument to observe that for five centuries and more, the greatest abundance of sheathed money, existed only in the Roman republic and in the Greek-Italian colonies, with no discussion of it among historians as a calamity and no discoveries of laws made to remedy it.

NOTE XXIII

See 1-23,

Monsignor Diego Vidania, of Spain, a man of sound

page 150.

judgment and of the most valiant courage and wide reading, exercised, with glory, the duty of Chaplain Maggiore among us, until 1733 when, having surpassed the age of one hundred years, he retired from it, just a little before his death. He ceded the position to my uncle, Monsignor Galiani, Archbishop of Taranto. Vidania had for many years before coming to Naples, exercised the duty of inquisitor, in Spain. He used to confess quite sincerely to his secretary, Don Giacomo Taccone, that of many years of inquisitions on witchcraft, sorcery, incantations and apparitions, which either he or his colleagues had made, or which existed in memorials in the registries of that Tribunal, made by others who were older -- none had ever been met with that were not, in the end, discovered to be either a deception or a voluntary illusion. Alone among so much vanity of things he had come across were two secret chemicals of the highest importance. One was a paste which when applied to a piece of iron (also of a superior quality like that with which it is customary for us to make the gates of prisons) and then pressed and kept over the heat of the hand for a period of five or six hours, it softened the iron to the extent that it could be twisted and bent better than if it had been placed over fire and heated -- and this, without such powerful drugs which would injure the health of the man who kept them closed within his hand. Reflecting on the fact that all the security of life and the benefits of every man are dependent upon iron and uniquely rest on this metal, he resolved to consign such a terrible secret to oblivion and to vow never to communicate its composition to anyone. The other secret had to do with the paste I have described. It was to be less strictly kept, and was communicated to Taccone. He, in turn, showed me a Spanish coin, a *grosso scudo*, which upon examination, even with great diligence, revealed nothing to be missing, no part of the impression on it smoothed over; and even if there were seen nearby the thinnest silver leaf, such as could have been detached with an application of this paste, one would have discovered that something was missing in the coins only by testing its weight. Don Giacomo Taccone was a man of probity not inferior to his doctrine and to good sense. He died in 1761, pastor of the Royal Church of Castelnuovo. All the preceding was recounted to me by him, who was my dearest friend. But he wished with equal virtue, to conceal it from everyone for as long as he lived, to the end that even this dangerous secret should be lost forever. I am flattered that it has; in

fact, remained completely secret, since during the entire course of my life, I have never heard anyone else talk about it.

NOTE XXIV

See 1-24,
page 205.

I have cautioned you that if I had asserted on this page that no more than 1.5 million copper ducats circulated in the kingdom in the year 1750,⁴⁻²¹ I did so because -- as I clearly explained on the following page -- it was important for me to keep myself much under the truth, in order not to be mistaken concerning the consequences of it. I am now pleased to see that in the last year of housekeeping in the city extended to the mint, it was affirmed to the sovereign that there were as many as 3.3 million ducats. How they have calculated what they have asserted to precisely, is unknown to me. I understand well that they could have with facility (by virtue of their duty and of the liberty they have, to be able to consult the registers and their archives) known with the greatest precision how much of it was minted at different times. But how much was then destroyed, dispersed, or dispatched cannot be known about it, except conjecturally. In any case, I believe that the quantity asserted by the housekeepers may be more correct than the underestimation I made, in order not to err. The same can be said of the quantity of silver and of gold, in circulation among us. Moreover, as I warned, in note XV above, the quantity of gold and silver in the kingdom has grown greatly -- almost twofold -- and I should not hesitate to assert that, actually, more than eight million silver ducats exist, and more than twenty million in gold.

NOTE XXV

See 1-25,
page 220.

It will not be difficult, in this brief sentence, for the reader to recognize -- if not the source, then at least the final analysis and conclusions of -- what I put down and argued, at some length, twenty years later in the *Dialogues sur le commerce des bleds*, published at Paris in 1769, that was so praised and refuted, both perhaps equally little merited. My illustrious friend, the abbé Morellet, therefore, erred when, in one of the confutations written by him, he believed to have perceived contradictions between this book, my

Della moneta, and that, and to have thus convinced me, by applying to the export trade what I have always generally said in favor of liberty. It has never been my opinion that the grain export trade should be absolutely prohibited or otherwise interfered with. I have only said -- and I hasten to repeat it -- that one should long for and desire that moment at which, because of increased population, rather than for the prohibition of inopportune laws, a nation is no longer in the position to do so; and I must add that the prince should sooner sacrifice such trade to increasing population than vice versa. The state of Puglia already appears to me to be so happy a state, or at least, it surely lacks little. Sicily can and should continue her free exportation as long as it does not return to that population which it had under the Dionysius, and Hierons and from which it has never recuperated.

NOTE XXVI

See 1-26,
page 222.

The kingdom would not be worth anything if it were deserted by its inhabitants. Its worth is, therefore, proportional to the inhabitants it has. These, today, number some 4.5 million. The consumption of each individual, taking an average of men and infants, is worth forty-eight ducats a year, this time averaging the dearer food of the capital with the cheaper food of the provinces. Interest of money is estimated at more than four and three-fourths per cent, bringing together the capital, where it is below this figure, with the provinces, where money is between five and six per cent, and sometimes even higher, as when it is foreign. Hence, the value, in capital, of every individual is of one thousand ducats, and that of the kingdom comes to a value of four thousand, five hundred millions. The yield of this capital is (at the rate suggested above) 216 millions, and this is the annual value of all the movable products in the kingdom, and of those which are fixed as well. But almost half this sum has no need to be represented in cash, since it is consumed by the proprietors themselves or given in barter or in place of cash. There remain, therefore, about 120 millions which must be represented by money; and, since the quantity of our actual money is certain to be 30 millions, all will see that, a turnover averaging only four or five times a year, is enough to move everything. And this is why our kingdom appears to have

every class of money in abundance. Everyone will concede that I have always understated, never overestimated the true figure. So that it will not be found that I have given an excessive value to every man in the realm in valuing him as a capital of twelve hundred ducats. Yet, despite what I have said, if I should seem excessively obscure, it is because the space of a note does not allow me to elaborate; and, if I should wish to, I could complete that book, which I have neither the desire nor the reason to do.⁴⁻²²

NOTE XXVII

See 1-27,
page 223.

This discourse made allusions to the researches of Don Bartolommeo Intieri, usefully completed many years ago, in order to find a better method of threshing grain in Puglia, where the fewness of inhabitants and the large size of harvests made it impossible to find enough people to thrash it with sticks. He ingeniously imagined various machines which would make it possible to economize on the use of mares, but which, in practice, turned out to be difficult to apply. One was finally fixed on, which did not eliminate entirely the need for mares, though it did lighten the need of mortal labor for them. The use of this one was introduced by Don Filippo Celentano, a gentleman of Manfredonia, with happy results. But his death, and that of Intieri, following shortly afterwards, together with our negligence and natural lassitude, and the stubbornness of peasants, so difficult to dislodge from customary ways of doing things, have made the method imagined by Intieri go into disuse, to the degree that it has become useful to posterity for me to commit it to memory. Perhaps more industrious times, when people shall return to its use, are not far off.

Intieri wished that when the threshing-flour is all covered with sheaves (which we call *gregne*) instead of allowing horses to enter too soon in order to thresh it, we should pass over it, circling, for two or three hours with a wooden machine, much like that which in military architecture is called a *Cavallo di Frisia*, except that the wooden shafts are longer and much thinner. This would be pulled along slowly by an ox, and would serve to make the first foot coverings of bands, that is, of sheaves of grain, relieving the mares of a good deal of work expended in entering into the whole ears, where they would sink up to their stomachs. Failing to find the hard part of the soil under their hooves, they would

virtually swim over the threshing-flour of the grain. But finding the threshing-flour, already reduced a great deal and levelled, by the path made by the machine, they would, with the slightest application of effort, be finished with it. Thus, eliminating the earliest hours of the morning, during which the stalks are most humid and more difficult to break, the mares will have rested more and will have had more time to graze. Consequently, they would suffer less. Moreover, fewer of them would be needed, and there would be no compulsion to use pregnant mares, or mares which have recently given birth and are suckling their young. These would not have to enter into the threshing-flour with so much destruction, by abortions of young colts that might have been born to pregnant mares, or suckling mares, from milk which is heated and unhealthy, which they would then give to their sucklings.

NOTE XXVIII

See 1-28,
page 228.

Surely, this pragmatic was dictated more by political reasons than by economic measures for the good of the state. In the preceding year, this kingdom passed into German domination, with its conquest by count Martinitz. The Pontiff wished to obligate himself to give the investiture. But because universal war still prevailed, the Pope, more a wise Pontiff than a bold prophet, not able to foresee the result, temporized. One wanted to rouse him, to frighten or threaten him. Various jurisdictional troubles were attacked, and this pragmatic was made merely a type of declaration of war on that prince, against whom it was not appropriate to make war. Yet it seems to me that, in any case, it was not decent to make a law that was impossible to carry out; which, once made, would not have been wise not to revoke entirely. This law shall always be, as long as it is sustained, cause for the exchange between Rome and Naples to be cut off from what it naturally would be, more than would be appropriate. And exchange, which is a long way from par, never turns out to be for the universal good of the state — even when it is advantageous to our merchants.

NOTE XXIX

See 1-29,
page 231.

Toward the beginning of the seventeenth century, when the social evils of the kingdom of Naples, which

began a century earlier and slowly continued to grow, began to grow worse — general confusion along with monetary and exchange disorders, became great. The latter, which had to be watched solely as an effect of the evils, because of which all of our money was flowing to other nations, was instead regarded by those ignorant of political and economic science (an ignorance in which even the most serious and celebrated men of the time lived) as their cause, which they attempted to beat with a host of regulations and completely erroneous laws, which instead of redressing the evils, increased them. This was a work worthy of a person fond of returning to such noble studies, to publish them anew with illuminations and notes, works already compiled on such materials the memory of which is today completely lost. I have many times considered doing this very thing myself, if only I had time enough to indulge such indolence; I would, indeed, have undertaken it willingly, for nothing is more likely to titillate the human mind as much as the memory of passed calamities. Discerning from these writings the hard and miserable state of the kingdom at that time, would increase the comfort of and jubilation from the present state. But the space of a note will not permit me to discuss this matter at great length. I will, however, at least indicate the title of the works of these writers in the hope that there will be kindled in others the wish to revive and republish them.

The most considerable of these was Giovan Donato Turbolo, master of the mint, of Naples, who in 1616, together with Tarquinio Longo, published a *Discorso della differenza e inegualita delle monete del Regno di Napoli colle altre monete di potenti convicini, e della causa della penuria di essa, con l'espedito dell' agguistamento ed abbondanza sì della monete di Regno, come di forastiere per beneficio pubblico.*⁴⁻²³ He dedicated this to the marquis of San Giuliano, Lieutenant of the Chamber. The same, in 1623, published another brief discourse addressed to the Viceroy, with the title: *Massime necessarie sopra le quali si deve fondare le risoluzioni, ed ordini per la provisione alli disordini correnti di monete, cambj, e banchi, acciò li negozj, e contrattazioni s'incaminano alla lor giusta, conveniente, et ordinaria regula.*⁴⁻²⁴ Finally, in 1629, he published a small volume in quarto, containing a *Discorso sopra le monete del Regno di Napoli per la renovazione della lega di esse monete ordinata, et eseguita nell' anno 1622, e degli effette da quella proceduti: e se el cambio alto per extra regno*

*sia d'utile, o danno de'Regnicoli.*⁴⁻²⁵ Following this essay, there are three *Relazioni*: the first of the diverse qualities of our money, minted from 1442 to 1628; the second of the quantity, quality, and value of the gold and silver coins issued by the mint from the year 1599 until 1628; the third, of our gold coins, issued from 1538 to 1628, and the equality of these with the gold coins of other powers. He ends the book with four discourses: two brought to light in the year 1618, at the instance of the fiscal advocate, Fabio Capece Galeota, for the revocation of the pragmatic published in that year, which ordered the payment of exchange in foreign money; two others, published in 1619 and 1620 and dedicated to the *Giunta* of the banks and the mint also concerning the substance of the coins. Of these works, not only is no mention of Toppi and of Nicodemi found, but, moreover, it is not known to me where other examples exist, except for that which I possess. Turbolo was most obscure in his style, and he treated the material more as master of the mint than as legal philosopher; but he did not fail to inculcate many verities, that he either did not wish to be understood, or which were improperly put into practice or put into practice just exactly opposite the way they should have been. It was, perhaps, not because of a lack of skill, but because, the true evils emerge from causes that are impossible to heal, that it was sought to hide them from the eyes of the multitudes. Turbolo Marcantonio de Santis had written on the same material, that is, of the monetary disorders, a little earlier. But, to me, he did not succeed in matching the work of that man because of how much research he had done on it. And it would be unknown to me, if I had not found it mentioned by the one who refuted it. This was Doctor Antonio Serra, of Cosenza, who, in 1613, had published by Lazzaro Scorriglio a *Breve trattato delle cause, che possono far abbondare li regni d'oro, e d'argento dove non sono miniere; coll' applicazione al Regno di Napoli, diviso in tre parti.*⁴⁻²⁶ Whoever reads this treatise will certainly be left surprised and filled with admiration, on seeing -- in a century of total ignorance concerning economic science -- how clearly and justly its author understood the ideas concerning the material of which he wrote, and how sanely he considered the causes of our ills and of their only effective remedies. Nothing else does he retain of the unhappiness of his century, but the sterile, dry, and obscure style, and everything of the scholastics and the consoling and repetitive lega-

lists, using many divisions and subdivisions, distinctions, articles, paragraphs, that sometimes tediously prolong the argument. Despite this defect, I would not hesitate to place him in the ranks of the first and oldest writers of the politico-economic science and would concede to Calabria even the, until now, unknown honor of having been its birthplace. But such is our fate that we cannot remember one glory without meeting with some reason to partly recant it. This man, who I dare to compare to Melon, of France, and, on these matters, to Locke, of the English, but who surpasses them both for having lived so long before them, as well as in a century of darkness and of errors in the science of economics. This man, of such a shrewd intellect, of such wholesome judgment, was scorned while he lived and has remained, together with his book, one who is forgotten after his death. No one has ever cited him. And, perhaps, only the copy, which Bartolommeo Intieri possessed and which he gave to me, has saved it from oblivion. But there is more, and worse. Serra dedicated his treatise to the count di Lemos, and he wrote it "from the jail at Vicaria." It is no wonder that monetary matters went into a precipice, as one Antonio Serra languished in prison and one Marcantonio de Santis was heavy with riches, and was the oracle of the *Collaterale*! What then became of Serra is unknown to me. Certain it is that none of his advice was heeded, which verifies the truth of an elegant proverb, and one considerate of our common people, which says that there are three things which are not esteemed in this world; these are: the power of a coarse man, the beauty of a prostitute, and the counsel of an ignoble man.

Finally, it is imperative that I write something of a writer, although a foreigner, who wrote on the evils of our money. This was the *Licentiado Don Luis Enriques de Fonseca*, who had been made administrator and treasurer of the royal income at Malaga. From there, upon coming to this kingdom, he published here, in 1681, by Salvator Castaldo, in his own language, a short *Tratado y discurso sobre la moneda de el Reyno de Napoles, su estado, y origen de sus daños, y el remedio para su consumo*, and to this treatise was added another entitled *Discurso en orden a que la Moneda de Vellon se disponga á modo de uso, por el qual sea mejor para los commercios, que la moneda de plata.*⁴⁻²⁷ This book would have been unknown to me had it not been for the courtesy of the marquis of Sarno who possessed it in his great and select library, and if he had not

pointed it out to me. It contains some useful information on the history of our money. But even more, it has helped me to discover that a great part of the ideas and policies of Broggia, to introduce vellon money among us, were taken from this writer, without citing him.

NOTE XXX⁴⁻²⁸

See 1-30,
page 249.

The hatred of President Montesquieu for every absolute government runs through all his writings, although he may have sought to mask it, changing the sense of the most commonly used words and calling a government a monarchy, though it is mixed, and virtually republican, which he wished France to be but which it was not, giving the names of despotism and tyranny to actual monarchies. He multiplies the imputations against the monarchies as much as he can, and he omits their virtues. He confuses the faults of the rulers with the intrinsic defects of the monarchical form; and he always attempts to draw general rules from particular cases. Possessed of his spirit, other members of parliament have, in few years, conducted that old and necessary body to total ruin. And in this fashion, the book *Of the Spirit of the Laws*⁴⁻²⁹ has caused that greater harm which it could to France, for the good of which it seemed to have been written and destined. So much is true; -- who writes of the arts of government must speak of the things as they are, not as he would want them to be.

NOTE XXXI⁴⁻³⁰

See 1-31,
page 250.

This was the lawyer, Don Carlo Franchi, who then died in December of 1769, with the fame of having been the most illustrious lawyer of his age among us. He was truly a man of the greatest genius, endowed with a natural eloquence of the spoken and written work, ornamented with a variety of select erudition, possessed of as much knowledge of law as was needed to complete his eulogy, so that he could conserve a mind undisturbed by sophistry and tortured interpretations, and with clear ideas of the just and the unjust. *Habuitque, quod est difficillimum, in juris sapientia modum.*⁴⁻³¹ In 1747, he published two theses in defense of Gaspare Starace, cashier of the Bank of the Holy Spirit, who was accused of gross fraud in a matter involving the weighing of

zecchini. In these books he presents lengthy discourses dealing with coinage and banking in Italy.

NOTE XXXII⁴⁻³²

See 1-32,
page 253.

Of the great causes of the obstacles by which, after a rapid beginning, the course of the progress and recovery of agriculture, were forcefully retarded among us, two are indicated by me in this book. These are: the disequilibrium of the burden which falls on the provinces compared to the capital; and the impossibility of fully placing into cultivation an immense quantity of lands, demesne or feudal, encumbered by rights and communal servitude. I do not wish to terminate these notes without stating the third of the great causes. At the early age at which I composed this book, I had not yet recognized it; but time and experience have made it possible for me to know it, finally, and I do not wish to suppress it, even at the risk of not being able to persuade many of it. I regard among the greatest causes of harm the customs systems of Foggia, a system which to the vulgar seems sacred and precious because it brings to the king four hundred thousand ducats. To the judicious, however, this seems absurd precisely because they see: only four hundred thousand ducats collected from an extension of the soil that could yield two million; a province inhabited by a hundred thousand people, which could actually feed, enrich, and make three hundred thousand happy; uncultivated lands which are preferred to the cultivated; feeding of animals in preference to people; an errant life in preference to a settled one; hay fields preferred to homes; the ravages of the seasons preferred to the shelter of the stables; and, finally, the perpetuation of a type of rural industry of which there is no similar example in cultivated Europe, save only in the deserts of Africa and in barbarian Tatar.

NOTE XXXIII⁴⁻³³

See 1-33,
page 263.

Although all writers, possibly even say all men, who lived in those times, were aware of the errors made by Law, in having created an immense quantity of notes which were the cause of the ruin of his bank, and very nearly even of France itself -- I have never found any writer who has stated the causes of the error

of this outstanding genius, or much less has stated the quantity of bank notes that should have been created so that he would not be mistaken. I wish, therefore, to state here briefly, my own opinion of it, compressing it -- as best I can -- into the confines of a note. Law, the controller, was obliged never to forget the sole objective of the bank he established, which was to restore that kingdom, and to cause to return there all the money which the calamity of wars had caused to leave, and in this way to repair the languor into which manufacturing and commerce had fallen, after the state had been bled dry. Thus, to unravel the problem from among so many deeds which the founding of the bank had involved, was an easy matter. It was necessary to calculate (and this was not difficult) how much money there was in France, in 1698, the era of her greatest reputation. Let us suppose it to have been five hundred million *lire*. Then let us estimate how much of it could have left the country; and let us suppose that to be three hundred million. Thus, for the bank, which with notes -- I should say with paper money -- pledged itself to create the illusion that the money which had left, was still extant, three hundred million *lire* sufficed. For having, with the tranquility of peace revived industry and trade -- the old quantity of money would return, and this would have served to extinguish the notes. But, because the quantity of money that had left could not only return in the years of prosperity, but could indeed even increase and surpass that which existed in 1698, Law could with assurance, have extended the number of notes to four hundred million. Fifteen years of peace should have been enough for full recovery. In this period, therefore, the refunding of all the notes, and their conversion into effective money should have been taking place, beginning at twenty million annually, and increasing progressively. In the same way, the notes should never have been refused, because the prospect and the certainty that a note could, in a short time, be converted into money, would always insure its acceptance and circulation. After fifteen years, it should find itself abolished throughout the bank. And if anyone should believe that it is necessary to render perpetual and lasting a bank made in this way, he should note that the continuation of the application of medicine to a body already cured, is the worst of counsels. Law erred in this: he believed that he could retire all the state's debts with notes. He, therefore, created notes in proportion to the mass of

all the debt of the crown of France, a most serious and unpardonable error for such a great man, for one thing has nothing to do with the other. This is because the retirement of all the debts of the state is neither useful nor possible to carry out; because, finally, if it were possible, justice requires that it be done with real money and not with paper, a fraud which does not represent anything actually existing at present, and nothing that is probable to exist in the future.

NOTE XXXIV

See 1-34,
page 264.

When I published these ideas on the justice and injustice of the fruits of money, I expected to meet with great opposition and censure on the part of moralists of some sorts and, on the other hand, praise and approval from those who might share my opinions. But, to my surprise, no praise and no reproval came to me for them; from which I have concluded that, in order to be approved of by the Scholastics, it is necessary not only to join them in sentiment, but also to use the same types of arguments and to refer to the same sources which they use. For this reason, any truth of the Scholastics that anyone might demonstrate with mathematical calculations, obfuscates them, nauseates and brings them displeasure. I believe, however, (whatever the Scholastics may have to say about it) that I have given here the general equation for the justice of all contracts. And that always reduces to this: whatever makes the reason for comforts vary, relative to us, should also cause to vary an equal sum of things such as must be given in exchange for the first thing.

NOTE XXXV

See 1-35,
page 275.

These words allude to Broggia's book,⁴⁻³⁴ already cited many times, to that of marquis Belloni⁴⁻³⁵ on trade, and to not a few others written by people devoted to trade -- all of whom reasoned about the profit of exchange as a thing that is most important to the state. This is a foolish opinion, one worthy only of men who would like to employ the power of the sovereign in their minute speculations and miserable profits. Gain on exchange, which only four or five trading houses in a whole kingdom might make, is nothing with respect to the state, notwithstanding the fact

that it is considerable wealth for the tradesmen. It would be more profitable to encourage the most miserable of manufacturers, and to enjoy, for example, the exportation of broaches and of bags made of some rough cloth, than all the best speculations in exchanges. Indeed, it is only important for the government to observe the state of the exchange in order to infer the political health of a mixed body, which by exchange, just as by the pulse in the human body, is always faithfully indicated.

APPENDIX TWO

COLLATION OF THE FIRST AND SECOND EDITIONS