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Name of Course: History of Finance

Topic of the E-Content

UNIT : HISTORY OF FINANCE DURING 1200 BC- 1BC

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Origin and Evolution of Money, Coin Money

Barter

Money, as we know it today, is the result of a long process.

At the beginning, there was no money. People engaged in barter, the exchange of merchandise for merchandise, without value equivalence.

Then, a person catching more fish than the necessary for himself and his group, exchanged his excess fish for the surplus of another person who, for instance, had planted and harvested more corn that what he would need. This elementary form of trade prevailed at the beginning of civilization, and may be found today among people of primitive economies, in regions where difficult access makes money scarce and, even in special situations, where people barter items without regard for their equivalence in value. This is the case, for instance, of a child who exchanges with his friend an expensive toy for another of lesser value, which it treasures.

Goods used in barter are generally in their natural state, in line with the environment conditions and activities developed by the group, corresponding to elementary needs of the group's members.

This exchange, however, is not free from difficulties, since there is not a common measure of value among the items bartered.

Commodity Money

Some commodities, for their utility, came to be more sought than others are.

Accepted by all, they assumed the role of currency, circulating as an element of exchange for other products and used to assess their value. This was the commodity money.

Cattle, mainly bovine, was one of the mostly used, and had the advantages of moving for itself, reproducing and rendering services, although there was the risk of diseases and death.

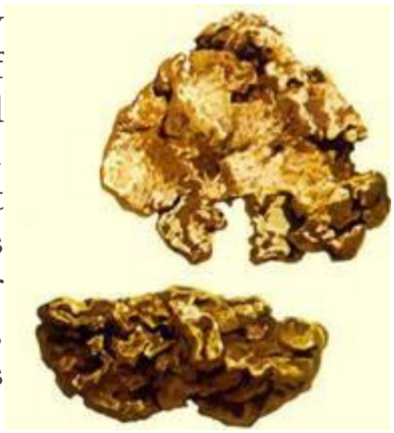
Salt was another commodity money, difficult to obtain, mainly in the interior part of continents, also used as a preservative for food. Both cattle and salt left the marks in the Portuguese language of their function as an exchange instrument, as we keep using words such as *pecunia* (money) and *pecúlio* (accumulated money) derived from the Latin work *pecus* (cattle). The word *capital* (asset) comes from the Latin *capita* (head). Similarly, the work *salário* (salary, compensation, normally in money, due by the employer for the services of an employee) originates from the use of *sal* [salt], in Rome, for payment of services rendered.

Brazil used, among other commodity moneys, cowry – brought by Africans – , Brazil wood, sugar, cocoa, tobacco and cloth, exchanged in Maranhão in the 17th Century due to the almost complete lack of money, traded in the form of yarn balls, skeins and fabrics.

Later, commodities became inconvenient for commercial trades, due to changes in their values, the fact of being indivisible and easily perishable, therefore checking the accumulation of wealth.

Metal

As soon as man discovered metal, it was used to made utensils and weapons previously made of stone.



For its advantages, as the possibility of treasuring, divisibility, easy of transportation and beauty, metal became the main standard of value. It was exchanged under different forms. At the beginning, metal was used in its natural state, and later under the form of ingots and, still, transformed into objects, from rings to bracelets.

The metal so traded required weight assessment and assaying of its purity at each transaction. Later, metal money gained definite form and weight, receiving a mark indicating its value, indicating also the person responsible for its issue. This measure made transactions faster, as it saved the trouble of weighing it and enabled prompt identification of the quantity of metal offered for trade.

Money in the Form of Objects

Metal items came to be very valued commodities.

As its production required, in addition to knowledge of melting, knowing where the metal could be found in nature, the task was not at the reach of everyone.

The increased value of these objects led to its use as money and the circulation as money of small-scale replicas of metal objects.

This is the case of the knife and key coins found in the East and the talent, a copper or bronze coin with the form of an animal skin that circulated in Greece and Cyprus.

Ancient Coins

In the 7th century B.C. the first coins resembling current ones appeared: they were small metal pieces, with fixed weight and value, and bearing an official seal, that is the mark of who has minted them and also a guaranty of their value.

Gold and silver coins are minted in Greece, and small oval ingots are used in Lydia, made of a gold and silver alloy called electrum.

Coins reflect the mentality of a people and their time. One may find political, economic, technological and cultural aspects in coins. Through the impressions found in coins, we are able to know the effigy of personalities who lived centuries ago. Probably, the first historic character to have his effigy registered in a coin was Alexander the Great, of Macedonia, around the year 330 B.C.

At the beginning, coin pieces were made by hand in a very coarse way, had irregular edges, and were not absolutely equal to one another as today's ones.

Gold, Silver and Copper

The first metals used in coinage were gold and silver. Employment of these metals happened for their rarity, beauty, immunity to corrosion, economic value, and for old religious habits. In primeval civilizations, Babylonian priests, knowledgeable about astronomy, taught to people the close relationship between gold and the sun, silver and the moon. This led to a belief in the magic power of such metals and of objects made with them.

Minting of gold and silver coins was common for many centuries, and pieces were guaranteed by their intrinsic value, that is to say, by the trade value of the metal used in their production. Then, a coin made with twenty grams of gold was exchanged for goods of even value.

For many centuries, countries minted their most highly valued coins in gold, using silver and copper for lesser value coins. This system was kept up to the end of the last century, when cupronickel, and later other metallic alloys, became used, and coins came to circulate for their extrinsic value, that is to say, for their face value, which is independent from their metal content.

With the appearance of paper money, minting of metal coins was restricted to lower values, necessary as change. In this new role, durability became the most requested quality for coins. Large quantities of modern alloys appeared, produced to support the high circulation of change money.

Paper Money

In the Middle Ages, the keeping of values with goldsmiths, persons trading with gold and silver items, was common. The goldsmith, as a guaranty, delivered a receipt. With time, these receipts came to be used to make payments, circulating from hand to hand, giving origin to paper money.

In Brazil, the first bank notes, precursors of the current notes, were issued by Banco do Brasil in 1810. They had its value written by hand, as we today do with our checks.

With time, in the same form it happened with coins, the government came to conduct the issue of notes, controlling counterfeits and securing the power to pay.

Currently, all countries have their central bank in charge of issuing coins and notes.

Paper money experienced an evolution regarding the technique used in their printing. Today, the printing of notes uses especially prepared paper and several printing processes, which are complementary to each other, assuring to the final product a great margin of security and durability conditions.

Different Shapes

Money has greatly changed its physical aspect along the centuries.

Coins had already very small sizes, as the *stater*, which circulated in Aradus, Phenicia, and some reached large sizes, such as the *thaler*, a 17th century Swedish copper piece.

Although today the circular form is used in almost the whole world, there had been oval, square, polygonal and other shapes for coins. They were also minted in different non-metallic materials, such as wood, leather and even porcelain. Porcelain coins circulated, in this century, in Germany, when the country was under the economic hardships caused by the war.

Bank notes were generally of rectangular lengthwise format, although with great variety of sizes. There are, still, square notes and those with inscriptions written in the vertical.

Bank notes depict the culture of the issuing country, and we may see in them characteristic and interesting motifs as landscapes, human types, fauna and flora, monuments of ancient and contemporary architecture, political leaders, historical scenes, etc.

Bank notes bear, in addition, inscriptions, generally in the country's official language, although several also bear the same inscriptions in other idioms. The inscriptions, frequently in English, aim at permitting the piece to be read by a larger number of people.

Money, whatever the form it has, is not valuable for itself, but for the goods and services it may purchase. It is a sort of security giving its bearer the faculty of being creditor of society and take advantage, through his or her purchasing power, of all conquests of modern man.

Money was not, hence, invented by a stroke of genius, but stemmed from a need, and its evolution reflects, at each time, the willingness of man to harmonize its monetary instrument to the reality of its economy.

Pythius Bank

The first banks were probably the religious temples of the ancient world, and were probably established sometime during the 3rd millenium B.C. Banks probably predated the invention of money. Deposits initially consisted of grain and later other goods including cattle and eventually precious metals such as gold, in the form of easy-to-carry compressed plates.

Ancient Greece holds further evidence of banking. Greek temples, as well as private and civic entities, conducted financial transactions such as loans, deposits, currency exchange, and validation of coinage. There is evidence too of credit, whereby in return for a payment from a client, a moneylender in one Greek port would write a credit note for the client who could "cash" the note in another city, saving the client the danger of carting coinage with him on his journey. Pythius, who operated as a merchant banker throughout Asia Minor at the beginning of the 5th century B.C., is the first individual banker of whom we have records. Many of the early bankers in Greek city-states were “metics” or foreign residents. Around 371 B.C., Pasion, a slave, became the wealthiest and most famous Greek banker, gaining his freedom and Athenian citizenship in the process.

Gresham's Law

Gresham's law is a monetary principle stating that "bad money drives out good." In currency valuation, Gresham's law was originally based on the observation that if a new coin ("bad money") is assigned the same face value as an older coin containing a higher amount of precious metal ("good money"), then the new coin will be used in circulation while the old coin will be hoarded and disappear from circulation.

Gresham's law today generally applies to a situation where two monetary units given the same face value will result in the overvalued one (bad money) being used and the undervalued one (good money) disappearing from circulation.

Coins were first made of gold, silver and other precious metals, which gave them their value. Over time, the number of precious metals used to make the coin decreased because the metals were worth more on their own than when minted into the coin itself. However, despite this, new coins were given the same face value as the existing coins for people to conduct their transactions. Because the value of the metal in the old coins was higher than the coin's face value, people would melt the coins down and sell the metal, or they would simply hoard them as a store of value. The new coins, with less precious metal content, would be considered "overvalued" and thus spent in transactions, while the old coins would become "undervalued" - hence, the hoarding effect, driving out the "good money" from circulation.

Name Origin of Gresham's Law:

Gresham's law was named after Sir Thomas Gresham (1519-1579), an English financier who served the Crown and founded the Royal Exchange of the City of London. The idea that "bad money drives out good" was observed by Gresham, as it had been elsewhere in the past. The theory was not given the formal name, Gresham's law, until the middle of the 19th century, when Scottish economist Henry Dunning Macleod attributed the monetary phenomenon to Gresham.

Aristotle and the Definition of Money

Aristotle (384 BC - 322 BC) was a Greek philosopher, a student of Plato and teacher of Alexander the Great. Aristotle discovered, formulated, and analyzed the problem of commensurability. He wondered how ratios for a fair exchange of heterogeneous things could be set. He searched for a principle that makes it possible to equate what is apparently unequal and non-comparable.

In the fifth section of the fifth book of *The Nicomachean Ethics*, Aristotle expands on his theory of just exchange and introduces his understanding of the purpose of money.

First, he notes that just exchanges are not based on *equality* but on *proportionality*. This is for two reasons. One is that people do not necessarily begin from a point of equality vis-a-vis each other, and so a just exchange between them is not one that brings them into equality, but one that preserves their preexisting inequality. The rather ugly example he uses to illustrate this is that of an official wounding some schmoe as opposed to some schmoe wounding an official. In the first case, it would be wrong to suggest wounding the official as a way of restoring justice; but in the second case it would be *insufficient* to wound the schmoe, but the schmoe should be additionally punished. The value of the wounds is proportional to the value of the people being wounded, and so the rectifying act must take this into account.

(It is both the ability to revenge evil with proportional evil on the evildoer, and the ability to bestow good proportionally on someone who has done one a favor, that holds a society together. The Graces, or Charities, were the Greek anthromorphizations of the mutual exchanges of good-for-good that held this society-cementing purpose, and Aristotle notes the important place of temples to the Graces in Greek society.)

The second reason is that in voluntary transactions, there is no way of determining an equality. People do not exchange actually equal goods, because there would be no point. People exchange different goods because each one wants what the other one has more than they want what they have.

For instance if a house-builder and a shoemaker want to exchange their products, and they want to do this justly, they must find some way of making their exchange correctly proportional. Clearly, trading a pair of shoes for a house isn't going to do the trick. We need some way of coming up with a common quantitative measurement of otherwise incommensurable products and services so that a just rate of exchange can be determined.

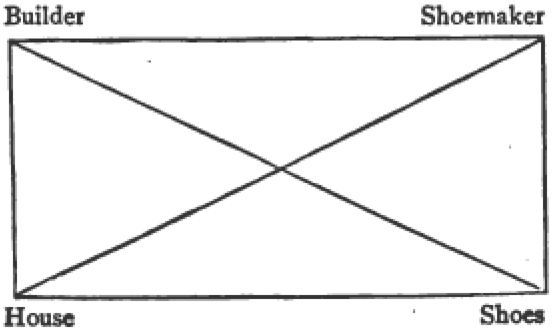


Illustration from *The Ethics of Aristotle: with Introductory Essay by George Henry Lewes*, originally translated by D.P. Chase in 1847, showing the exchange relationship between a builder, a shoemaker, and their products: a house and shoes.

Aristotle says that money exists to provide this common quantitative measurement. But how is this measurement made in the first place? Aristotle says that it is "demand" that initially creates the measurement and that money is only the units we use to denominate it. Actually, he says "*chreia*," not "demand," which may be misleading, but I'm following the lead of the majority of the translators I've been consulting.

Scott Meikle in *Aristotle's Economic Thought* (1997) argues that this translation is too facile and was motivated by a desire to mold Aristotle into a presager of classical economics. He says that "*chreia*" might also be translated in terms of such things as "'use', 'advantage', [and] 'service'," which would leave a much different impression.

Various translations of *chreia*

- "demand" (Ross, Chase, Browne, Grant, Hatch, Jackson, Paley, Stock, Vincent, Welldon, Williams)
- "need" (Brewer, Burnet, Peters, Stewart)
- "want" (Gillies)
- "indigence" (Taylor)

But, for the purposes of this discussion, just plug in your favorite determiner of value: cost-of-production, supply-and-demand, subjective-want, whatever. Aristotle says that a just exchange is one that preserves the correct proportionality of goods, in terms of this determiner, but denominated with the medium of exchange, that is, money. It is this way in which unequal goods can be compared as though they were qualitatively equivalent, if only for the purposes of just economic exchange.

Imagine, for instance, an exchange of shoes-for-food between a shoemaker and a farmer. If they come to a mutually-satisfactory ratio of shoes-to-food, you can determine from this the value ratio of the two products, and can use this information to solve, mathematically, other ratios. In other words, if you know the value ratio of shoes to food, and you know the value ratio of food to houses, then you can determine how many shoes you'd need to exchange for a house.

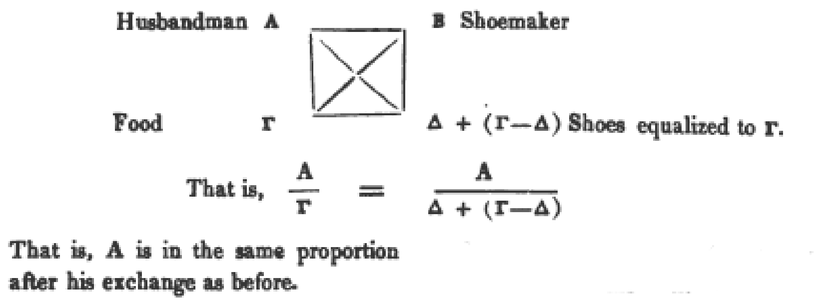


Illustration from *The Nicomachean Ethics of Aristotle with English Notes* by John S. Brewer (1836) showing Aristotle's example of the proper way of regulating an exchange of food for shoes between a farmer (husbandman) and a shoemaker.

Well… in theory, anyway. In practice, nobody is willing to take a warehouse full of shoes in exchange for a house. That's where money comes in. It's a semi-stable value measuring stick that permits the quantitative comparison of a huge variety of goods and services for the purposes of facilitating exchange. It simplifies this process of triangulating on the appropriate ratio between two qualitatively-different goods (say food and houses) from previous exchanges of qualitatively-different goods by replacing these barter ratios with single quantities.

Money makes just exchanges practical and easier; but it is the existence of a dimension on which they can be quantitatively compared for the purposes of exchange (*chreia*) that makes these exchanges possible in the first place.

Aristotle wraps this up by reminding us that Justice, being a virtue, needs to be seen as a mean between two opposing vices. One vice is in committing injustice so as to get more than you deserve; the opposing vice is in being unjustly treated so as to get less than you deserve.

Aristotle says that money, as a common measure of everything, makes things commensurable and makes it possible to equalize them. He states that it is in the form of money, a substance that has a telos (purpose), that individuals have devised a unit that supplies a measure on the basis of which just exchange can take place. Aristotle thus maintains that everything can be expressed in the universal equivalent of money. He explains that money was introduced to satisfy the requirement that all items exchanged must be comparable in some way.

Within such frame work, Aristotle defined the characteristics of a good form of money:

1.) It must be durable. Money must stand the test of time and the elements. It must not fade, corrode, or change through time.

2.) It must be portable. Money hold a high amount of 'worth' relative to its weight and size.

3.) It must be divisible. Money should be relatively easy to separate and re-combine without affecting its fundamental characteristics. An extension of this idea is that the item should be 'fungible'. Dictionary.com describes fungible as:

"(esp. of goods) being of such nature or kind as to be freely exchangeable or replaceable, in whole or in part, for another of like nature or kind."

4.) It must have intrinsic value. This value of money should be independent of any other object and contained in the money itself.

Demosthenes

Demosthenes (384 – 12 October 322 BC) was a Greek statesman and orator of ancient Athens. His orations constitute a significant expression of contemporary Athenian intellectual prowess and provide an insight into the politics and culture of ancient Greece during the 4th century BC. Demosthenes learned rhetoric by studying the speeches of previous great orators. He delivered his first judicial speeches at the age of 20, in which he argued effectively to gain from his guardians what was left of his inheritance. For a time, Demosthenes made his living as a professional speech-writer (logographer) and a lawyer, writing speeches for use in private legal suits.

Demosthenes grew interested in politics during his time as a logographer, and in 354 BC he gave his first public political speeches. He went on to devote his most productive years to opposing Macedon's expansion. He idealized his city and strove throughout his life to restore Athens' supremacy and motivate his compatriots against Philip II of Macedon. He sought to preserve his city's freedom and to establish an alliance against Macedon, in an unsuccessful attempt to impede Philip's plans to expand his influence southward by conquering all the other Greek states.

After Philip's death, Demosthenes played a leading part in his city's uprising against the new king of Macedonia, Alexander the Great. However, his efforts failed and the revolt was met with a harsh Macedonian reaction. To prevent a similar revolt against his own rule, Alexander's successor in this region, Antipater, sent his men to track Demosthenes down. Demosthenes took his own life, in order to avoid being arrested by Archias of Thurii, Antipater's confidant.

The Greek Island Of Delos

Delos was one of the most sacred places of ancient Greece, and one of the most robust trade centers as well. The island undoubtedly owed its success to its superb location at the very center of the Aegean, allowing seafarers to meet it in the middle of their journey as they sailed from the major commercial centers of the Aegean--Athens, Miletos, Corinth, Macedonia, Thassos, Samos, Milos, Rhodes, and Crete, to name a few. Its importance also made it coveted by the most powerful maritime powers that strove for control of its harbors and sanctuary.

There is evidence of habitation in the island that dates back to 3000 BCE, and of elevated importance during the Mycenaean period (1580-1200 BCE). Its reputation as a sacred island began attracting large numbers of devotees, and along with them trade flourished, transforming Delos into a robust commercial port for almost a thousand years after the 8th c. BCE.

Its claim as the birthplace of Apollo gave Delos a strong religious identity that lasted all the way until Byzantine times. In an era when religious festivals were economic engines, attracting thousands of pilgrims and generating healthy economic growth, Delos stood strong at the center of the wealthiest commercial centers and benefited greatly.

Despite being wind-swept and almost barren of vegetation, it had several features that made it conducive to habitation (probably reached 25000 inhabitants by the early 1st century BCE). The island's several harbors and position in the middle of the Cyclades put it on the map of every sailor of antiquity, and the island also had an excellent supply of water from two sources: flowing all year in the small river Poppins and trapped in a layer of limestone that covers a layer of granite below.

Its small size (about 5 x 1.3 km) however made the island vulnerable and easy pray for several powerful maritime powers through the centuries. Naxos and Paros attempted to establish control of Delos early in Archaic period, but it was the Athenians that dominated the island on and off for almost five hundred years. The Athenians initiated two "purifications" of the island. The first one in 540 BCE decreed that all burials within sight of the temple of Apollo be removed, while the second purification in 426/5 BCE removed all burials, and forbade births and deaths on the island. After the Persian wars, starting in 478 BCE, Delos hosted the treasury of the Delian League before its subsequent relocation to the Athenian Acropolis–much to the displeasure of many members of the alliance.

By the end of the 4th century the Hellenic kingdom of Macedonia became the island's protector, and the Delian population doubled with many citizens of other cities settling on the island to take advantage of its position as a strong commercial center. But after the Roman conquest of Greece, the Athenians dominated the island once again and promptly removed all Delians, replacing them with poor Athenians who received pastures on the island by lot. The island continued to enjoy wealth and fame, which led its population to increase.

Over the centuries, Delos was truly a cosmopolitan center with a diverse population that included people from all around the Mediterranean, but in 88 BCE the Romans razed the island during their war with Mithridates (an ally of the Athenians who controlled the island), a calamity Delos never recovered from. Away from the limelight for several centuries, its population dwindled and by the 3d century CE only a small Christian community called it home. Subsequently, Delos was plundered several times in the 8th and 9th centuries and during Ottoman occupation the nearly deserted island became and remained a pirate stronghold. The ancient ruins were also pilfered for marble and stone which were used by the nearby islanders for their own construction needs.

The French School of Archaeology began excavating Delos in 1873. Today Delos is an archaeological site reachable by boat from Mykonos. A small museum among the ruins shelters and exhibits some of the important objects unearthed during the ongoing excavations.

Views of Leading Thinkers:

1. Socrates: dare to disagree

Socrates, one of the first philosophers, insisted on our right to think for ourselves. Too often, he warned, humans sleepwalk through life, simply going along with the crowd. This is dangerous in questions of morality, and particularly in corporate governance. When corruption is uncovered, too often people say "everyone else was doing it". But our characters are our responsibility. Socrates was prepared to die rather than go against his conscience. Does your organisation encourage independent thinkers, and people who follow their conscience? Does it allow people to give critical feedback to managers? Does it create opportunities for good people to blow the whistle on bad behaviour?

2. Aristotle: let people seek fulfillment

Aristotle was a great biologist as well as a great philosopher. He based his ethics on a psychological theory of human nature, insisting that we are naturally virtuous, rational, social and happiness-seeking. Governments and organisations need to build the best systems to let humans fulfill their natural drives. Aristotle's philosophy was an influence on Edward Deci and Richard Ryan's Self-Determination Theory, which suggests that employees will work harder for you, and perform better, if you give them tasks they find meaningful and morally worthwhile.

3. Plutarch: be a good role model

Plutarch, the ancient Greek historian and educator, understood that humans are incredibly social creatures, who constantly observe the people around them and imitate them. Unfortunately, people often grow up surrounded by bad role models. However, we can steer people, by providing them with better patterns to imitate. That's what Plutarch tried to do with his famous work, Parallel Lives, which offered biographical sketches of some of the great Greek and Roman heroes – Cicero, Caesar, Alexander the Great, Pericles – to give young people something to emulate.

4. Epictetus: build a resilient mind-set

Epictetus grew up a slave in Rome, and then became a Stoic philosopher. Both of these positions were incredibly precarious – slaves could be abused or killed by their owners, while Stoic philosophers were constantly falling foul of the imperial authorities (Epictetus himself was eventually exiled). Epictetus coped with this insecurity by constantly reminding himself what he could control and what he couldn't. We can control our thoughts, beliefs and attitudes, but everything else is to some extent out of our control – other people's perceptions and behaviour, the economy, the weather, the future and the past. If you focus on what is beyond your control, and obsess over it, you will end up feeling helpless. Focus on what you can control, and you will feel a measure of autonomy even in chaotic situations.

5. Rufus: keep track of your ethical progress

Musonius Rufus was known as the Socrates of Rome. He was another Stoic, who taught that philosophy cannot just be theoretical. If you want to be an ethical individual or an ethical company, you can't just study ethics, you have to practise it, every day, to get into good habits. The ancient Greek word for ethics is actually the same word for habit.

6. Epicurus: the art of happiness

Epicurus was a fourth century Greek philosopher who taught, rather scandalously, that the aim of life was simply to be as happy as possible here on Earth, before we die and dissolve back into the atomic universe. He warned that humans are very bad at being happy, and very good at inventing reasons to be miserable. Philosophy should teach us how to be happy, he suggested. For example, it could teach us how to bring our attention to the present moment, to savour it. It could also teach us to limit our desires to what is easy to get, not inflating our needs with endless artificially stimulated desires.