

It all began, as usual, with the Greeks. The ancient Greeks were the first civilized people to use their reason to think systematically about the world around them. The Greeks were the first philosophers (*philo sophia* – lovers of wisdom), the first people to think deeply and to figure out how to attain and verify knowledge about the world. Other tribes and peoples had tended to attribute natural events to arbitrary whims of the gods. A violent thunderstorm, for example, might be ascribed to something that had irritated the god of thunder. The way to bring on rain, then, or to curb violent thunderstorms, would be to find out what acts of man would please the god of rain or appease the thunder god. Such people would have considered it foolish to try to figure out the natural causes of rain or of thunder. Instead, the thing to do was to find out what the relevant gods wanted and then try to supply their needs.

The Greeks, in contrast, were eager to use their reason – their sense observations and their command of logic – to investigate and learn about their world. In so doing, they gradually stopped worrying about the whims of the gods and to investigate actual entities around them. Led in particular by the great Athenian philosopher Aristotle (384–322 B.C.), a magnificent and creative systematizer known to later ages as The Philosopher, the Greeks evolved a theory and a method of reasoning and of science which later came to be called the *natural law*.

1.1 The natural law

Natural law rests on the crucial insight that *to be* necessarily means to be *something*, that is, some particular thing or entity. There is no Being in the abstract. Everything that *is*, is some particular thing, whether it be a stone, a cat, or a tree. By empirical fact there is more than one kind of thing in the universe; in fact there are thousands, if not millions of kinds of things. Each thing has its own particular set of properties or attributes, its own *nature*, which distinguishes it from other kinds of things. A stone, a cat, an elm tree; each has its own particular nature, which man can discover, study and identify.

Man studies the world, then, by examining entities, identifying similar kinds of things, and classifying them into categories each with its own properties and nature. If we see a cat walking down the street, we can immediately include it into a set of things, or animals, called ‘cats’ whose nature we have already discovered and analysed.

If we can discover and learn about the natures of entities *X* and *Y*, then we can discover what happens when these two entities *interact*. Suppose, for example, that when a certain amount of *X* interacts with a given amount of *Y* we get a certain quantity of another thing, *Z*. We can then say that the effect, *Z*, has been *caused* by the interaction of *X* and *Y*. Thus, chemists may discover that when two molecules of hydrogen interact with one molecule of oxygen, the result is one molecule of a new entity, water. All these entities –

4 *Economic thought before Adam Smith*

hydrogen, oxygen and water – have specific discoverable properties or natures which can be identified.

We see, then, that the concepts of *cause* and *effect* are part and parcel of natural law analysis. Events in the world can be traced back to the interactions of specific entities. Since natures are given and identifiable, the interactions of the various entities will be replicable under the same conditions. The same causes will always yield the same effects.

For the Aristotelian philosophers, logic was not a separate and isolated discipline, but an integral part of the natural law. Thus, the basic process of identifying entities led, in ‘classical’ or Aristotelian logic, to the Law of Identity: a thing is, and cannot be anything other than, what it is: *a* is *a*.

It follows, then, that an entity cannot be the negation of itself. Or, put another way, we have the Law of Non-Contradiction: a thing cannot be both *a* and *non-a*. *a* is not and cannot be *non-a*.

Finally, in our world of numerous kinds of entities, anything must be either *a* or it won’t be; in short, it will either be *a* or *non-a*. Nothing can be both. This gives us the third well-known law of classical logic: the Law of the Excluded Middle: everything in the universe is either *a* or *non-a*.

But if every entity in the universe – if hydrogen, oxygen, stone, or cats – can be identified, classified, and its nature examined, then so too can man. Human beings must also have a specific nature with specific properties that can be studied, and from which we can obtain knowledge. Human beings are unique in the universe because they can and do study themselves, as well as the world around them, and try to figure out what goals they should pursue and what means they can employ to achieve them.

The concept of ‘good’ (and therefore of ‘bad’) is only relevant to *living* entities. Since stones or molecules have no goals or purposes, any idea of what might be ‘good’ for a molecule or stone would properly be considered bizarre. But what might be ‘good’ for an elm tree or a dog makes a great deal of sense: specifically, ‘the good’ is whatever conduces to the life and the flourishing of the living entity. The ‘bad’ is whatever injures such an entity’s life or prosperity. Thus, it is possible to develop an ‘elm tree ethics’ by discovering the best conditions: soil, sunshine, climate, etc., for the growth and sustenance of elm trees; and by trying to avoid conditions deemed ‘bad’ for elm trees: elm blight, excessive drought, etc. A similar set of ethical properties can be worked out for various breeds of animals.

Thus, natural law sees ethics as living-entity- (or *species*-) relative. What is good for cabbages will differ from what is good for rabbits, which in turn will differ from what is good or bad for man. The ethic for each species will differ according to their respective natures.

Man is the only species which can – and indeed must – carve out an ethic for himself. Plants lack consciousness, and therefore cannot choose or act.

The consciousness of animals is narrowly perceptual and lacks the conceptual: the ability to frame concepts and to act upon them. Man, in the famous Aristotelian phrase, is uniquely the *rational animal* – the species that uses reason to adopt values and ethical principles, and that acts to attain these ends. Man *acts*; that is, he adopts values and purposes, and chooses the ways to achieve them.

Man, therefore, in seeking goals and ways to attain them, must discover and work within the framework of the natural law: the properties of himself and of other entities and the ways in which they may interact.

Western civilization is in many ways Greek; and the two great philosophic traditions of ancient Greece which have been shaping the Western mind ever since have been those of Aristotle and his great teacher and antagonist Plato (428–347 BC). It has been said that every man, deep down, is either a Platonist or an Aristotelian, and the divisions run throughout their thought. Plato pioneered the natural law approach which Aristotle developed and systematized; but the basic thrust was quite different. For Aristotle and his followers, man's existence, like that of all other creatures, is 'contingent', i.e. it is not necessary and eternal. Only God's existence is necessary and transcends time. The contingency of man's existence is simply an unalterable part of the natural order, and must be accepted as such.

To the Platonists, however, especially as elaborated by Plato's follower, the Egyptian Plotinus (204–270 AD), these inevitable limitations of man's natural state were intolerable and must be transcended. To the Platonists, the actual, concrete, temporal factual existence of man was too limited. Instead, this existence (which is all that any of us has ever seen) is a fall from grace, a fall from the original non-existent, ideal, perfect, eternal being of man, a god-like being perfect and therefore without limits. In a bizarre twist of language, this perfect and never-existent being was held up by the Platonists as the *truly* existent, the true essence of man, from which we have all been alienated or cut off. The nature of man (and of all other entities) in the world is to be *some thing* and to exist in time; but in the semantic twist of the Platonists, the *truly* existent man is to be eternal, to live outside of time, and to have no limits. Man's condition on earth is therefore supposed to be a state of degradation and alienation, and his purpose is supposed to be to work his way back to the 'true' limitless and perfect self alleged to be his original state. Alleged, of course, on the basis of no evidence whatever – indeed, evidence itself identifies, limits, and therefore, to the Platonic mind, corrupts.

Plato's and Plotinus's views of man's allegedly alienated state were highly influential, as we shall see, in the writings of Karl Marx and his followers. Another Greek philosopher, emphatically different from the Aristotelian tradition, who prefigured Hegel and Marx was the early pre-Socratic philosopher Heraclitus of Ephesus (c.535–475 BC). He was pre-Socratic in the sense

of predating Plato's great teacher Socrates (470–399 BC), who wrote nothing but has come down to us as interpreted by Plato and by several other followers. Heraclitus, who was aptly given the title 'The Obscure' by the Greeks, taught that sometimes opposites, *a* and *non-a*, can be identical, or, in other words, that *a* can be *non-a*. This defiance of elemental logic can perhaps be excused in someone like Heraclitus, who wrote before Aristotle developed classical logic, but it is hard to be so forbearing to his later followers.

1.2 The politics of the *polis*

When man turns the use of his reason from the inanimate world to man himself and to social organization, it becomes difficult for pure reason to avoid giving way to the biases and prejudices of the political framework of the age. This was all too true of the Greeks, including the Socratics, Plato and Aristotle. Greek life was organized in small city-states (the *polis*) some of which were able to carve out overseas empires. The largest city-state, Athens, covered an area of only about one thousand square miles, or half the size of modern Delaware. The key facet of Greek political life was that the city-state was run by a tight oligarchy of privileged citizens, most of whom were large landowners. Most of the population of the city-state were slaves or resident foreigners, who generally performed the manual labour and commercial enterprise respectively. The privilege of citizenship was reserved to descendants of citizens. While Greek city-states fluctuated between outright tyrannies and democracies, at its most 'democratic' Athens, for example, reserved the privileges of democratic rule to 7 per cent of the population, the rest of whom were either slaves or resident aliens. (Thus, in Athens of the fifth century BC, there were approximately 30 000 citizens out of a total population of 400 000.)

As privileged landowners living off taxes and the product of slaves, Athenian citizens had the leisure for voting, discussion, the arts and – in the case of the particularly intelligent – philosophizing. Although the philosopher Socrates was himself the son of a stonemason, his political views were ultra-elitist. In the year 404 BC, the despotic state of Sparta conquered Athens and established a reign of terror known as the Rule of the Thirty Tyrants. When the Athenians overthrew this short-lived rule a year later, the restored democracy executed the aged Socrates, largely on suspicion of sympathy with the Spartan cause. This experience confirmed Socrates's brilliant young disciple, Plato, the scion of a noble Athenian family, in what would now be called an 'ultra-right' devotion to aristocratic and despotic rule.

A decade later, Plato set up his Academy on the outskirts of Athens as a think-tank not only of abstract philosophic teaching and research, but also as a fountainhead of policy programmes for social despotism. He himself tried three times unsuccessfully to set up despotic regimes in the city state of

Syracuse, while no less than nine of Plato's students succeeded in establishing themselves as tyrants over Greek city-states.

While Aristotle was politically more moderate than Plato, his aristocratic devotion to the *polis* was fully as evident. Aristotle was born of an aristocratic family in the Macedonian coastal town of Stagira, and entered Plato's Academy as a student at the age of 17, in 367 BC. There he remained until Plato's death 20 years later, after which he left Athens and eventually returned to Macedonia, where he joined the court of King Philip and tutored the young future world conqueror, Alexander the Great. After Alexander ascended the throne, Aristotle returned to Athens in 335 BC and established his own school of philosophy at the Lyceum, from which his great works have come down to us as lecture notes written by himself or transcribed by his students. When Alexander died in 323 BC, the Athenians felt free to vent their anger at Macedonians and their sympathizers, and Aristotle was ousted from the city, dying shortly thereafter.

Their aristocratic bent and their lives within the matrix of an oligarchic *polis* had a greater impact on the thought of the Socratics than Plato's various excursions into theoretical right-wing collectivist Utopias or in his students' practical attempts at establishing tyranny. For the social status and political bent of the Socratics coloured their ethical and political philosophies and their economic views. Thus, for both Plato and Aristotle, 'the good' for man was not something to be pursued by the individual, and neither was the individual a person with rights that were not to be abridged or invaded by his fellows. For Plato and Aristotle, 'the good' was naturally not to be pursued by the individual but by the *polis*. Virtue and the good life were *polis*- rather than individual-oriented. All this means that Plato's and Aristotle's thought was statist and elitist to the core, a statism which unfortunately permeated 'classical' (Greek and Roman) philosophy as well as heavily influencing Christian and medieval thought. Classical 'natural law' philosophy therefore never arrived at the later elaboration, first in the Middle Ages and then in the seventeenth and eighteenth centuries, of the 'natural rights' of the individual which may not be invaded by man or by government.

In the more strictly economic realm, the statism of the Greeks means the usual aristocratic exaltation of the alleged virtues of the military arts and of agriculture, as well as a pervasive contempt for labour and for trade, and consequently of money-making and the seeking and earning of profit. Thus Socrates, openly despising labour as unhealthy and vulgar, quotes the king of Persia to the effect that by far the noblest arts are agriculture and war. And Aristotle wrote that no good citizens 'should be permitted to exercise any low mechanical employment or traffic, as being ignoble and destructive to virtue.'

Furthermore, the Greek elevation of the *polis* over the individual led to their taking a dim view of economic innovation and entrepreneurship. The

entrepreneur, the dynamic innovator, is after all the locus of individual ego and creativity, and is therefore the harbinger of often disturbing social change, as well as economic growth. But the Greek and Socratic ethical ideal for the individual was not an unfolding and flowering of inner possibilities, but rather a public/political creature moulded to conform to the demands of the *polis*. That kind of social ideal was designed to promote a frozen society of politically determined status, and certainly not a society of creative and dynamic individuals and innovators.

1.3 The first 'economist': Hesiod and the problem of scarcity

No one should be misled into thinking that the ancient Greeks were 'economists' in the modern sense. In the course of pioneering in philosophy, their philosophizing on man and his world yielded fragments of politico-economic or even strictly economic thoughts and insights. But there were no modern-style treatises on economics *per se*. It is true that the term 'economics' is Greek, stemming from the Greek *oikonomia*, but *oikonomia* means not economics in our sense but 'household management', and treatises on 'economics' would discuss what might be called the technology of household management – useful perhaps, but certainly not what we would regard today as economics. There is furthermore a danger, unfortunately not avoided by many able historians of economic thought, of eagerly reading into fragments of ancient sages the knowledge gained by modern economics. While we surely should not overlook any giants of the past, we must also avoid any 'presentist' seizing upon a few obscure sentences to hail alleged but non-existent forerunners of sophisticated modern concepts.

The honour of being the first Greek economic thinker goes to the poet Hesiod, a Boeotian who lived in the very early ancient Greece of the middle of the eighth century BC. Hesiod lived in the small, self-sufficient agricultural community of Ascra, which he himself refers to as a 'sorry place...bad in winter, hard in summer, never good'. He was therefore naturally attuned to the eternal problem of scarcity, of the niggardliness of resources as contrasted to the sweep of man's goals and desires. Hesiod's great poem, *Works and Days*, consisted of hundreds of verses designed for solo recitation with musical accompaniment. But Hesiod was a didactic poet rather than a mere entertainer, and he often broke out of his story line to educate his public in traditional wisdom or in explicit rules for human conduct. Of the 828 verses in the poem, the first 383 centred on the fundamental economic problem of scarce resources for the pursuit of numerous and abundant human ends and desires.

Hesiod adopts the common religious or tribal myth of the 'Golden Age', of man's alleged initial state on earth as an Eden, a Paradise of limitless abundance. In this original Eden, of course, there was no economic problem, no

problem of scarcity, because all of man's wants were instantaneously fulfilled. But now, all is different, and 'men never rest from labour and sorrow by day and from perishing by night.' The reason for this low state is an all-encompassing scarcity, the result of man's ejection from Paradise. Because of scarcity, notes Hesiod, labour, materials and time have to be allocated efficiently. Scarcity, moreover, can only be partially overcome by an energetic application of labour and of capital. In particular, labour – work – is crucial, and Hesiod analyses the vital factors which may induce man to abandon the god-like state of leisure. The first of these forces is of course basic material need. But happily, need is reinforced by a social disapproval of sloth, and by the desire to emulate the consumption standards of one's fellows. To Hesiod, emulation leads to the healthy development of a spirit of competition, which he calls 'good conflict', a vital force in relieving the basic problem of scarcity.

To keep competition just and harmonious, Hesiod vigorously excludes such unjust methods of acquiring wealth as robbery, and advocates a rule of law and a respect for justice to establish order and harmony within society, and to allow competition to develop within a matrix of harmony and justice. It should already be clear that Hesiod had a far more sanguine view of economic growth, of labour and of vigorous competition, than did the far more philosophically sophisticated Plato and Aristotle three and a half centuries later.

1.4 The pre-Socratics

Man is prone to error and even folly, and therefore a history of economic thought cannot confine itself to the growth and development of economic truths. It must also treat influential error, that is, error that unfortunately influenced later developments in the discipline. One such thinker is the Greek philosopher Pythagoras of Samos (c.582–c.507 BC) who, two centuries after Hesiod, developed a school of thought which held that the *only* significant reality is *number*. The world not only *is* number, but each number even embodies moral qualities and other abstractions. Thus justice, to Pythagoras and his followers, *is* the number four, and other numbers consisted of various moral qualities. While Pythagoras undoubtedly contributed to the development of Greek mathematics, his number-mysticism could well have been characterized by the twentieth century Harvard sociologist Pitirim A. Sorokin as a seminal example of 'quantophobia' and 'metromania'. It is scarcely an exaggeration to see in Pythagoras the embryo of the burgeoning and overweeningly arrogant mathematical economics and econometrics of the present day.

Pythagoras thus contributed a sterile dead-end to philosophy and economic thought, one that later influenced Aristotle's pawky and fallacious attempts to

develop a mathematics of justice and of economic exchange. The next important positive development was contributed by the pre-Socratic (actually contemporary of Socrates) Democritus (c.460–c.370 BC).

This influential scholar from Abdera was the founder of ‘atomism’ in cosmology, that is, the view that the underlying structure of reality consists of interacting atoms. Democritus contributed two important strands of thought to the development of economics. First, he was the founder of subjective value theory. Moral values, ethics, were absolute, Democritus taught, but economic values were necessarily subjective. ‘The same thing’, Democritus writes, may be ‘good and true for all men, but the pleasant differs from one and another’. Not only was valuation subjective, but Democritus also saw that the usefulness of a good will fall to nothing and become negative if its supply becomes superabundant.

Democritus also pointed out that if people restrained their demands and curbed their desires, what they now possess would make them seem relatively wealthy rather than impoverished. Here again, the relative nature of the subjective utility of wealth is recognized. In addition, Democritus was the first to arrive at a rudimentary notion of time preference: the Austrian insight that people prefer a good at present to the prospect of the good arriving in the future. As Democritus explains, ‘it is not sure whether the young man will ever attain old age; hence, the good on hand is superior to the one still to come’.

In addition to the adumbration of subjective utility theory, Democritus’s other major contribution to economics was his pioneering defence of a system of private property. In contrast to Oriental despotisms, in which all property was owned or controlled by the emperor and his subordinate bureaucracy, Greece rested on a society and economy of private property. Democritus, having seen the contrast between the private property economy of Athens and the oligarchic collectivism of Sparta, concluded that private property is a superior form of economic organization. In contrast to communally owned property, private property provides an incentive for toil and diligence, since ‘income from communally held property gives less pleasure, and the expenditure less pain’. ‘Toil’, the philosopher concluded, ‘is sweeter than idleness when men gain what they toil for or know that they will use it’.

1.5 Plato’s right-wing collectivist utopia

Plato’s search for a hierarchical, collectivist utopia found its classic expression in his most famous and influential work, *The Republic*. There, and later in *The Laws*, Plato sets forth the outline of his ideal city-state: one in which right oligarchic rule is maintained by philosopher-kings and their philosophic colleagues, thus supposedly ensuring rule by the best and wisest in the community. Underneath the philosophers in the coercive hierarchy are the

'guardians' – the soldiers, whose role is to aggress against other cities and lands and to defend their *polis* from external aggression. Underneath them are to be the body of the people, the despised producers: labourers, peasants and merchants who produce the material goods on which the lordly philosophers and guardians are to live. These three broad classes are supposed to reflect a shaky and pernicious leap if there ever was one – the proper rule over the soul in each human being. To Plato, each human being is divided into three parts: 'one that craves, one that fights, and one that thinks', and the proper hierarchy of rule within each soul is supposed to be reason first, fighting next, and finally, and the lowest, grubby desire.

The two ruling classes – the thinkers and the guardians – that really count are, in Plato's ideal state, to be forced to live under pure communism. There is to be no private property whatsoever among the elite; all things are to be owned communally, including women and children. The elite are to be forced to live together and share common meals. Since money and private possessions, according to the aristocrat Plato, only corrupt virtue, they are to be denied to the upper classes. Marriage partners among the elite are to be selected strictly by the state, which is supposed to proceed according to the scientific breeding already known in animal husbandry. If any of the philosophers or guardians find themselves unhappy about this arrangement, they will have to learn that their personal happiness means nothing compared to the happiness of the *polis* as a whole – a rather murky concept at best. In fact, those who are not seduced by Plato's theory of the essential reality of ideas will not believe that there *is* such a real living entity as a *polis*. Instead, the city-state or community consists only of living, choosing *individuals*.

To keep the elite and the subject masses in line, Plato instructs the philosopher-rulers to spread the 'noble' lie that they themselves are descended from the gods whereas the other classes are of inferior heritage. Freedom of speech or of inquiry was, as one might expect, anathema to Plato. The arts are frowned on, and the life of the citizens was to be policed to suppress any dangerous thoughts or ideas that might come to the surface.

Remarkably, in the very course of setting forth his classic apologia for totalitarianism, Plato contributed to genuine economic science by being the first to expound and analyse the importance of the division of labour in society. Since his social philosophy was founded on a necessary separation between classes, Plato went on to demonstrate that such specialization is grounded in basic human nature, in particular its diversity and inequality. Plato has Socrates say in *The Republic* that specialization arises because 'we are not all alike; there are many diversities of natures among us which are adapted to different occupations'.

Since men produce different things, the goods are naturally traded for each other, so that specialization necessarily gives rise to exchange. Plato also

points out that this division of labour increases the production of all the goods. Plato saw no problem, however, in morally ranking the various occupations, with philosophy of course ranking highest and labour or trade being sordid and ignoble.

The use of gold and silver as money greatly accelerated with the invention of coinage in Lydia in the early seventh century BC and coined money quickly spread to Greece. In keeping with his distaste for money-making, trade and private property, Plato was perhaps the first theorist to denounce the use of gold and silver as money. He also disliked gold and silver precisely because they served as international currencies accepted by all peoples. Since these precious metals are universally accepted and exist apart from the imprimatur of government, gold and silver constitute a potential threat to economic and moral regulation of the *polis* by the rulers. Plato called for a government fiat currency, heavy fines on the importation of gold from outside the city-state, and the exclusion from citizenship of all traders and workers who deal with money.

One of the hallmarks of an ordered utopia sought by Plato is that, to remain ordered and controlled, it must be kept relatively static. And that means little or no change, innovation or economic growth. Plato anticipated some present-day intellectuals in frowning on economic growth, and for similar reasons: notably, fear of collapse of the domination of the state by the ruling élite. Particularly difficult in trying to freeze a static society is the problem of population growth. Quite consistently, therefore, Plato called for freezing the size of the population of the city-state, keeping the number of its citizens limited to 5 000 agricultural landlord families.

1.6 Xenophon on household management

A disciple and contemporary of Plato was the Athenian landed aristocrat and army general, Xenophon (430–354 BC). Xenophon's economic writings were scattered throughout such works as an account of the education of a Persian prince, a treatise on how to increase government revenue, and a book on 'economics' in the sense of thoughts on the technology of household and farm management. Most of Xenophon's adumbrations were the usual Hellenic scorn for labour and trade, and admiration for agriculture and the military arts, coupled with a call for a massive increase in government operations and interventions in the economy. These included improving the port of Athens, building markets and inns, establishing a governmental merchant fleet and greatly expanding the number of government-owned slaves.

Interspersed in this roll of commonplace bromides, however, were some interesting insights into economic matters. In the course of his treatise on household management, Xenophon pointed out that 'wealth' should be defined as a resource that a person can use and knows how to use. In this way,

something that an owner has neither the ability nor the knowledge to use cannot really constitute part of his wealth.

Another insight was Xenophon's anticipation of Adam Smith's famous dictum that the extent of the division of labour in society is necessarily limited by the extent of the market for the products. Thus, in an important addition to Plato's insights on the division of labour, written 20 years after *The Republic*, Xenophon says that 'In small towns the same workman makes chairs and doors and plows and tables, and often the same artisan builds houses...' whereas in the large cities 'many people have demands to make upon each branch of industry', and therefore 'one trade alone, and very often even less than a whole trade, is enough to support a man'. In large cities', we find one man making men's boots only; and another, women's only'... one man lives by cutting out garments, another by fitting together the pieces'.

Elsewhere, Xenophon outlines the important concept of general equilibrium as a dynamic tendency of the market economy. Thus, he states that when there are too many coppersmiths, copper becomes cheap and the smiths go bankrupt and turn to other activities, as would happen in agriculture or any other industry. He also sees clearly that an increase in the supply of a commodity causes a fall in its price.

1.7 Aristotle: private property and money

The views of the great philosopher Aristotle are particularly important because the entire structure of his thought had an enormous and even dominant influence on the economic and social thought of the high and late Middle Ages, which considered itself Aristotelian.

Although Aristotle, in the Greek tradition, scorned moneymaking and was scarcely a partisan of *laissez-faire*, he set forth a trenchant argument in favour of private property. Perhaps influenced by the private-property arguments of Democritus, Aristotle delivered a cogent attack on the communism of the ruling class called for by Plato. He denounced Plato's goal of the perfect unity of the state through communism by pointing out that such extreme unity runs against the diversity of mankind, and against the reciprocal advantage that everyone reaps through market exchange. Aristotle then delivered a point-by-point contrast of private as against communal property. First, private property is more highly productive and will therefore lead to progress. Goods owned in common by a large number of people will receive little attention, since people will mainly consult their own self-interest and will neglect all duty they can fob off on to others. In contrast, people will devote the greatest interest and care to their own property.

Second, one of Plato's arguments for communal property is that it is conducive to social peace, since no one will be envious of, or try to grab the property of, another. Aristotle retorted that communal property would lead to

continuing and intense conflict, since each will complain that he has worked harder and obtained less than others who have done little and taken more from the common store. Furthermore, not all crimes or revolutions, declared Aristotle, are powered by economic motives. As Aristotle trenchantly put it, 'men do not become tyrants in order that they may not suffer cold'.

Third, private property is clearly implanted in man's nature: His love of self, of money, and of property, are tied together in a natural love of exclusive ownership. Fourth, Aristotle, a great observer of past and present, pointed out that private property had existed always and everywhere. To impose communal property on society would be to disregard the record of human experience, and to leap into the new and untried. Abolishing private property would probably create more problems than it would solve.

Finally, Aristotle wove together his economic and moral theories by providing the brilliant insight that only private property furnishes people with the opportunity to act morally, e.g. to practise the virtues of benevolence and philanthropy. The compulsion of communal property would destroy that opportunity.

While Aristotle was critical of money-making, he still opposed any limitation – such as Plato had advocated – on an individual's accumulation of private property. Instead, education should teach people voluntarily to curb their rampant desires and thus lead them to limit their own accumulations of wealth.

Despite his cogent defence of private property and opposition to coerced limits on wealth, the aristocrat Aristotle was fully as scornful of labour and trade as his predecessors. Unfortunately, Aristotle stored up trouble for later centuries by coining a fallacious, proto-Galbraithian distinction between 'natural' needs, which should be satisfied, and 'unnatural' wants, which are limitless and should be abandoned. There is no plausible argument to show why, as Aristotle believes, the desires filled by subsistence labour or barter are 'natural', whereas those satisfied by far more productive money exchanges are artificial, 'unnatural' and therefore reprehensible. Exchanges for monetary gain are simply denounced as immoral and 'unnatural', specifically such activities as retail trade, commerce, transportation and the hiring of labour. Aristotle had a particular animus toward retail trade, which of course directly serves the consumer, and which he would have liked to eliminate completely.

Aristotle is scarcely consistent in his economic lucubrations. For although monetary exchange is condemned as immoral and unnatural, he also praises such a network of exchanges as holding the city together through mutual and reciprocal give-and-take.

The confusion in Aristotle's thought between the analytic and the 'moral' is also shown in his discussion of money. On the one hand, he sees that the

growth of money greatly facilitated production and exchange. He sees also that money, the medium of exchange, represents general demand, and 'holds all goods together'. Also money eliminates the grave problem of 'double coincidence of wants', where each trader will have to desire the other man's goods directly. Now each person can sell goods for money. Furthermore, money serves as a store of values to be used for purchases in the future.

Aristotle, however, created great trouble for the future by morally condemning the lending of money at interest as 'unnatural'. Since money cannot be used directly, and is employed only to facilitate exchanges, it is 'barren' and cannot itself increase wealth. Therefore the charging of interest, which Aristotle incorrectly thought to imply a direct productivity of money, was strongly condemned as contrary to nature.

Aristotle would have done better to avoid such hasty moral condemnation and to try to figure out why interest is, *in fact*, universally paid. Might there not be something 'natural', after all, about a rate of interest? And if he had discovered the economic reason for the charging – and the paying – of interest, perhaps Aristotle would have understood why such charges are moral and not unnatural.

Aristotle, like Plato, was hostile to economic growth and favoured a static society, all of which fits with his opposition to money-making and the accumulation of wealth. The insight of old Hesiod into the economic problem as the allocation of scarce means for the satisfying of alternative wants was virtually ignored by both Plato and Aristotle, who instead counselled the virtue of scaling down one's desires to fit whatever means were available.

1.8 Aristotle: exchange and value

Aristotle's difficult but influential discussion of exchange suffered grievously from his persistent tendency to confuse analysis with instant moral judgement. As in the case of charging interest, Aristotle did not remain content to complete a study of why exchanges take place in real life before leaping in with moral pronouncements. In analysing exchanges, Aristotle declares that these mutually beneficial transactions imply a 'proportional reciprocity', but it is characteristically ambivalent in Aristotle whether *all* exchanges are by nature marked by reciprocity, or whether only proportionately reciprocal exchanges are truly 'just'. And of course Aristotle was never one to raise the question: why do people voluntarily engage in 'unjust' exchanges? In the same way, why should people voluntarily pay interest charges if they are really 'unjust'?

To muddle matters further, Aristotle, under the influence of the Pythagorean number-mystics, introduced obscure and obfuscating mathematical terms into what could have been a straightforward analysis. The only dubious benefit of this contribution was to give many happy hours to historians of

economic thought attempting to read sophisticated modern analysis into Aristotle. This problem has been aggravated by an unfortunate tendency among historians of thought to regard great thinkers of the past as necessarily consistent and coherent. That of course is a grievous historiographic error; however great they may have been, any thinkers can slip into error and inconsistency, and even write gibberish on occasion. Many historians of thought do not seem able to recognize that simple fact.

Aristotle's famous discussion of reciprocity in exchange in Book V of his *Nicomachean Ethics* is a prime example of descent into gibberish. Aristotle talks of a builder exchanging a house for the shoes produced by a shoemaker. He then writes: 'The number of shoes exchanged for a house must therefore correspond to the ratio of builder to shoemaker. For if this be not so, there will be no exchange and no intercourse'. Eh? How can there possibly be a ratio of 'builder' to 'shoemaker'? Much less an equating of that ratio to shoes/houses? In what *units* can men like builders and shoemakers be expressed?

The correct answer is that there is no meaning, and that this particular exercise should be dismissed as an unfortunate example of Pythagorean quantophobia. And yet various distinguished historians have read tortured constructions of this passage to make Aristotle appear to be a forerunner of the labour theory of value, of W. Stanley Jevons, or of Alfred Marshall. The labour theory is read into the unsupportable assumption that Aristotle 'must have meant' labour hours put in by the builder or shoemaker, while Josef Soudek somehow sees here the respective skills of these producers, skills which are then measured by their products. Soudek eventually emerges with Aristotle as an ancestor of Jevons. In the face of all this elaborate wild goose chase, it is a pleasure to see the verdict of gibberish supported by the economic historian of ancient Greece, Moses I. Finley, and by the distinguished Aristotelian scholar H.H. Joachim, who has the courage to write, 'How exactly the values of the producers are to be determined, and what the ratio between them can mean is, I must confess, in the end unintelligible to me'.¹

Another grave fallacy in the same paragraph in the *Ethics* did incalculable damage to future centuries of economic thought. There Aristotle says that in order for an exchange (*any* exchange? *a just* exchange?) to take place, the diverse goods and services 'must be equated', a phrase Aristotle emphasizes several times. It is this necessary 'equation' that led Aristotle to bring in the mathematics and the equal signs. His reasoning was that for *A* and *B* to exchange two products, the value of both products must be equal, otherwise an exchange would not take place. The diverse goods being exchanged for one another must be made equal because only things of equal value will be traded.

The Aristotelian concept of equal value in exchange is just plain wrong, as the Austrian School was to point out in the late nineteenth century. If *A* trades

shoes for sacks of wheat owned by *B*, *A* does so because he prefers the wheat to the shoes, while *B*'s preferences are precisely the opposite. If an exchange takes place, this implies not an equality of values, but rather a *reverse inequality* of values in the two parties making the exchange. If I buy a newspaper for 30¢ I do so because I prefer the acquisition of the newspaper to keeping the 30 cents, whereas the newsagent prefers getting the money to keeping the newspaper. This double inequality of subjective valuations sets the necessary precondition for any exchange.

If the equation of ratio of builder to labourer is best forgotten, other parts of Aristotle's analysis have been seen by some historians as predating parts of the economics of the Austrian School. Aristotle clearly states that money represents human need or demand, which provides the motivation for exchange, and 'which holds all things together'. Demand is governed by the use-value or desirability of a good. Aristotle follows Democritus in pointing out that after the quantity of a good reaches a certain limit, after there is 'too much', the use value will plummet and become worthless. But Aristotle goes beyond Democritus in pointing out the other side of the coin: that when a good becomes scarcer, it will become subjectively more useful or valuable. He states in the *Rhetoric* that 'what is rare is a greater good than what is plentiful. Thus gold is a better thing than iron, though less useful'. These statements provide an intimation of the correct influence of different levels of supply on the value of a good, and at least a hint of the later fully formed Austrian marginal utility theory of value, and its solution of the 'paradox' of value.

These are interesting allusions and suggestions; but a few fragmentary sentences scattered throughout different books hardly constitute a fully fledged precursor of the Austrian School. But a more interesting harbinger of Austrianism has only come to the attention of historians in recent years: the groundwork for the Austrian theory of marginal productivity – the process by which the value of final products is imputed to the means, or factors, of production.

In his little-known work, the *Topics*, as well as in his later *Rhetoric*, Aristotle engaged in a philosophical analysis of the relationship between human ends and the means by which people pursue them. These means, or 'instruments of production', necessarily derive their value from the final products useful to man, 'the instruments of action'. The greater the desirability, or subjective value, of a good, the greater the desirability, or value of the means to arrive at that product. More important, Aristotle introduces the marginal element into this imputation by arguing that if the acquisition or addition of a good *A* to an already desirable good *C* creates a more desirable result than the addition of good *B*, then *A* is more highly valued than *B*. Or, as Aristotle put it: 'judge by means of an addition, and see if the addition of *A* to

the same thing as B makes the whole more desirable than the addition of B'. Aristotle also introduces an even more specifically pre-Austrian, or pre-Böhm-Bawerkian, concept by stressing the differential value of the *loss*, rather than the addition of a good. Good A will be more valuable than B, if the loss of A is considered to be worse than the loss of B. As Aristotle clearly phrased it: 'That is the greater good whose contrary is the greater evil, and whose loss affects us more.'

Aristotle also took note of the importance of the complementarity of economic factors of production in imputing their value. A saw, he pointed out, is more valuable than a sickle in the art of carpentry, but it is not more valuable everywhere and in all pursuits. He also pointed out that a good with many potential uses will be more desirable, or valuable, than a good with only one use.

Critics of the economic importance of Aristotle's analysis charge that, with the exception of the saw-and-sickle passage, Aristotle made no economic application of his broad philosophical treatment of imputation. But this charge misses the crucial Austrian point – made with particular force and elaboration by the twentieth century Austrian economist Ludwig von Mises – that economic theory is but a part, a subset, of a broader, 'praxeological' analysis of human action. By analysing the logical implications of the employment of means to the pursuit of ends in all human action, Aristotle brilliantly began to lay the groundwork for the Austrian theory of imputation and marginal productivity over two millennia later.

1.9 The collapse after Aristotle

It is remarkable that the great burst of economic thinking in the ancient world covered only two centuries – the fifth and the fourth BC – and only in one country, Greece. The rest of the ancient world, and even Greece before and after these centuries, was essentially a desert of economic thought. Nothing of substance came out of the great ancient civilizations in Mesopotamia and India, and very little except political thought in the many centuries-long civilization of China. Remarkably, little or no economic thought emerged out of those civilizations, even though the economic institutions: trade, credit, mining, crafts, etc. were often far advanced, and even more so than in Greece. Here is an important indication that, contrary to Marxists and other economic determinists, economic thought and ideas do not simply emerge as a reflex of the development of economic institutions.

There is no way that historians of thought can ever completely penetrate the mysteries of creativity in the human soul, and thus completely explain this relatively brief flowering of human thought. But it is surely no accident that it was the Greek philosophers who provided us with the first fragments of systematic economic theory. For philosophy, too, was virtually non-exist-