

P.F.M. FONTAINE

THE LIGHT AND THE DARK
A CULTURAL HISTORY OF DUALISM

VOLUME I

DUALISM IN THE ARCHAIC AND EARLY CLASSICAL
PERIODS OF GREEK HISTORY

J.C. GIEBEN, PUBLISHER
AMSTERDAM 1986

KONINKLIJKE BIBLIOTHEEK



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P R E F A C E

People try to comprehend the world. They do this in a double sense, for they want to interpret it and they want to summarize it. They feel compelled to summarize it, since the world presents itself to them as a multitude of phenomena and events which are often confused and obscure. To create some order they use ideas and concepts, and with the help of these they bring together what is scattered and multitudinous. Often they have a preference for some all-embracing concept, like world or cosmos or universe. But however much they exert themselves, there never is a complete unity; the multifarious elements can never be included in some final whole in which they amalgamate harmoniously. Such an amalgam would, indeed, produce an illusion. Thus we find ourselves saddled with a fundamental and primordial opposition, that of the One and the Many. It is clear that we need this opposition, and others too, in order to understand the world since we want many kinds of groupings and sets like series and categories which we tend to oppose, often very strongly, to each other. It is of very common things that I am speaking, of concepts that everyone employs each day innumerable times: day and night, summer and winter, love and hate, life and death, man and woman.

A great number of such oppositions are only relative; the value of the direct opposite depends on the point of view of the observer. A man who, coming out of the polar cold of a winter night, enters an unheated room, may find it comfortable. The fact that we say that people become old at a later age than formerly, only goes to prove that the frontiers between old and young are shifting. According to modern medical science the distance between health and sickness is so narrow that nearly everybody may be said to be the victim of some disease. It may happen, however, that oppositions such as these grow more virulent; in that case they become harsh, bitter and irreconcil-

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IX

P R E F A C E

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able. Love and hate are solid oppositions but, nevertheless, we speak sometimes of a >>love-hate-relationship<<. War and peace do not belong together but for more than forty years we have been living in a situation that is neither a real peace nor a state of war either. Still more inexorable is the opposition between life and death. The person who is dead does not live anymore, and yet there exists the common human desire to conquer death with life. Such deep oppositions could be termed polarities.

But the gap may become still deeper and broader till it is finally unbridgeable. Or must we say that people, or rather certain people, feel the need to push an opposition to extremes? If this is the case then we must speak of >>dualism<<. It is then no longer possible to reduce the terms of the opposition more or less to each other; there are no longer intermediate terms; there is no longer any relationship or connection at all. In that case the terms of the opposition easily acquire the character of principles, and they tend to grow into systems with a complete ideology; behind these ideologies may stand organized groups or sects. Dualistic oppositions of this kind may be those between body and soul, between the One and the Many, between seeming and being, and many others. The most forceful dualistic opposition, however - the one that has been the most productive -, is that between good and evil. In dualistic ideologies the world always becomes divided into two opposite halves, into two systems that are absolutely opposed and often are not even dependent on one another. The two systems always differ from each other in quality. For one of them is always seen as much better and more valuable than the other; it is preferable to the other in the most primary and absolute way. The lesser system exists only to be rejected.

History teaches us that there have been quite a number of dualistic systems and groups, that of the Manichees, for instance - Augustine in his youth belonged to this sect - , and, during the Middle Ages, the Cathars and the Albigenses. The strongest and most extensive manifestation of dualism, nevertheless, was Gnosticism in the second century A.D. Under this name many sects are grouped to-

gether. Despite their considerable differences we use to call all of them >>Gnostics<<, because they adhered to the >>gnosis<<. This >>gnosis<< is a special kind of knowledge that a person needs, according to the Gnostics, in order to ascend from this bad and unsatisfactory world into one that is perfect and absolutely good. It is this knowledge that redeems man. Of course, this is only an extremely short summary of what the terms >>dualism, gnosis, Gnosticism<< signify and contain; in this volume they will be elaborated and amplified. Our intention is to place the main emphasis on >>dualism<<, since although much attention already has been paid to gnosis and Gnosticism, the phenomenon of dualism has never been treated in depth. The reader who is anxious for more precise explanations is referred to the afterword >>on definitions<<. If required one could read it immediately after this preface.

Often a direct relationship is thought to exist between (dualistic) Gnosticism and the famous Iranian dualism. What I mean is, naturally, the doctrine of Zoroaster (Zarathustra), that of Ormuzd and Anriman, of light and dark, of good and evil. More often than not every kind of dualism is traced back to Iranian dualism as though it were the source and mother of all dualisms in world-history. But it would be fatal to consider Persia as the universal cradle from which all dualisms have originated. The tendency towards dualism is a general human phenomenon; it occurs in every age and with every people, even in our European and American civilisations. The oppositions in this life are given, they are normal and indispensable, and it is in them that dualistic inclinations have their origin.

Certain men and certain groups of people force up the oppositions till they become inexorable and unbridgeable. This is not peculiar to thinkers, philosophers and scholars; it strikes the imagination of men in all walks of life and it is far from rare. Its source is the human mind. But why? Why do people think in this way? I do not think that at this moment a generic answer to this question is possible; only a thorough investigation of the historical

manifestations of dualism may provide it. It is possible that for some people this world becomes more clearly structured if they can divide it sharply into two halves. Quite apart from this the contrast between life as it is and life as it might be or should be, between light and darkness, between the real and the ideal, exerts an almost compulsive fascination on the minds of men.

It would be wrong too to consider dualism solely from the viewpoint of the history of religions, as if it were a purely religious phenomenon, although it is frequently viewed in this way. It is much more general, with far wider ramifications; it is not restricted to religion and the religious. Hence in the sub-title of this book, I speak of >>a cultural history of dualism<<; this means that it is treated as an historical and cultural phenomenon, in the widest sense. I attempt to describe it in its context of social and historical circumstances and to study it in its connection with historical events, with culture and civilisation, with philosophy and literature, with religion and society. Moreover, I want to show how in its turn dualism influences the social and cultural matrix from which it arises.

There exist a number of symptoms which in themselves are not dualistic and which, taken together, do not produce dualism, although they are clearly related to the phenomenon of dualism. In an elaborated dualistic or Gnostic system all or nearly all of them occur, for instance, the significance of the number three, the role of fate, the significance of a special knowledge, the preference for closed or secret societies, elitism, the denigration of women, a pessimistic or tragic view of life. The reader will meet these and many others in this volume, especially in Chapter III. One might call them >>parameters<<. I use them as a heuristic apparatus, a kind of divining rod, to detect dualism. For when they occur - and especially in combination with one another - we are perfectly entitled to the supposition that dualism is near at hand.

Since from the oldest times to our own day, dualism constitutes a world-wide phenomenon, it merits a comprehensive history. This

volume may be considered the first instalment - with the proviso that it may be read entirely for its own sake. I must confess, however, that study of dualism has been no part of my normal professional work, and therefore I had to prepare and to write this book in my spare time. This means, of course, that I was occupied with it for a long time. My first notes are dated May 27, 1977, and now it is July 18, 1986. I wrote Chapter I in 1980, Chapter II in 1981, Chapter III in 1982 and Chapter IV in 1983. In January 1984 the Dutch typescript had made its way to several experts whose evaluation was of great importance to me, and then I began to look for a publisher. How bitter was my disappointment when the very first one, a well-known Dutch publisher of scholarly works, told me that he was not ready to take my book. This, he said, had nothing to do with its scholarly quality but with the fact that the Dutch book-market, especially for books of this kind, is so small. Since then I have heard this economic argument over and over again. I presented this book later on with the help of the >>Historical Centre<< at Haarlem to a great number of publishers, and always with the same result, or rather, with no result. And then, after twenty-two months, when the prospect was bleaker than ever, my troubles were over all of a sudden. In December 1985 I came into contact with Mr. J.C. Gieben, publisher in Amsterdam, who declared himself ready to publish this volume, on two conditions: it had to be in English, and I had to offer it >>camera ready<< (otherwise it would become far too expensive). I started immediately with the translation, and since then everything rolled on smoothly.

I could have chosen various historical eras as a starting point for this study. As a former grammar-school pupil, I had a natural preference to begin with Greece, and I offer this volume as a gesture of gratitude to the grammar-school I attended so many years ago. Volume II will deal with the classical period of Greece, between ca. 500 and 338 B.C. But this book addresses itself not only to those readers who attended such a school with its emphasis on a classical education but to everyone who is interested in the

cultural history of ideas - to everyone, therefore, who takes the development and the destiny of our civilisation to heart. In order to assist somewhat those readers who do not remember every scrap of information about ancient history they heard at school I have described connections and contexts sometimes extensively. Scholars who are experts in a special field must forgive me for it.

However, it is and it will remain a history of dualism; it is not a history of Greece, of Hellenic culture, literature or religion. Therefore many things, important things too, will not be found in it. In disregard of strict chronology, the first chapter is dedicated to Pythagoras and the societies that bear his name for the simple reason that these fraternities are the first great manifestation of dualistic conceptions. This may give the reader an idea not only of what dualism is but also how it influences a way of life.

There are many people without whose help this volume would not have appeared. First of all I have to thank my dear wife Anneke. She corrected painstakingly all the versions of this book, that is to say the typewritten Dutch version, then the typewritten first English version, and, finally, the definitive >>camera ready<< English version. The last was the most difficult to do since the corrections, typed on little slips of paper, had to be stuck into the text carefully. Born with two left hands as I am I could only look on gratefully. Thus my wife has read my book thrice - a feat of arms that, I fear, will be repeated by no one else. The second one to read the whole text (in the Dutch version) was my eldest daughter, Dr. Th. Smidt van Gelder-Fontaine. In spite of the fact that she is a housewife and a mother of children and although she was preparing her doctoral thesis she provided me with valuable comment. I am grateful to her too, as I am grateful to my friend and former colleague, Dr. A. Budé, a classical scholar, who read all the four chapters and supplied many notes on them.

Each of the four chapters has been sent to an expert in that special field - Ch. I to Dr. J. Mansfeld, professor of ancient philosophy at Utrecht State University, Ch. II to Dr. C. Verhoeven,

professor of ancient philosophy at the University of Amsterdam, Ch. III to Dr. J.-M. Bremer, professor of Greek literature at the University of Amsterdam, and Ch. IV to Dr. H. Versnel, professor of ancient literature and history at Leyden State University. Although, with the exception of Prof. Bremer, they did not know me personally, and in spite of the fact that they have certainly no lack of work, they readily complied with my request. Not only have they provided me with a great number of corrections, emendations and suggestions (and saved me from some errors!) but they also encouraged me to carry on with this work because they thought it is valuable. For all their kind and indispensable help I feel an immense gratitude. Prof. Verhoeven and still more Prof. Bremer went out of their way to make a publication (in Dutch) possible. It was certainly not their fault that it was in vain. The same applies to Mr. A. Weijer, director of the >>Historical Centre<<; he too thought up one possibility after the other, in vain too, but nevertheless, his efforts will not be forgotten by this author.

Next, there was the problem of the translation. As I said already I did it myself - for the simple reason that I cannot afford the very high costs of a professional translation. But I needed, of course, the assistance of, if possible, a native English speaker. Through the kind offices of a former colleague I had the extreme luck to find exactly the man I wanted in the person of Dr. John R. Dove, associate-professor of English literature at the University of Oulu in Finland. Very conscientiously but at the same time very tactfully and sensibly he corrected my first English version, supplying me with a number of what he calls >>suggestions<<. It goes without saying that I took over all of them. I feel deeply indebted to him, and I am extremely grateful for the fact that, with his manner of working, the final result has remained my own text, in English too. This means, of course, that the sole responsibility not only for the contents of this volume but also for its wording, rests with me alone. Finally, I am still amazed how smoothly things are going since I first entered the office of Mr. J. C. Gieben. He is the last

one to express my thanks to but certainly not the least since he made this publication into a reality.

Piet F.M. Fontaine
Amsterdam NL

CHAPTER I PYTHAGOREANISM

1. An unavoidable anachronism

Every study of Greek dualism must begin with the description of Early Pythagoreanism. This movement may not perhaps be the oldest one with dualistic characteristics; in this period of Greek history it is, however, the one that is most easily recognizable. In the following pages we will try to determine what older or contemporary influences helped to shape this movement. Then we will turn our attention to the question of how Early Pythagoreanism, in its turn, influenced later Greek society.

Pythagoreanism takes its name from a certain Pythagoras, who is supposed to have lived in the sixth century B.C. The problem is that this Pythagoras did not leave behind a single written word 1). There is not one utterance that can be ascribed to him with absolute certainty; there is no biography from his own days; finally, the very few contemporaneous sources are, with some exceptions, silent about him. Therefore it is nearly impossible to indicate with any certainty what elements of the Pythagorean patrimony are the authentic creation of the Master himself. It was on this account that Guthrie could say that the history of Pythagoreanism is perhaps the most controversial subject in all Greek philosophy 2). And Burnet added that is not easy to give any account of Pythagoras that can claim to be regarded as historical; a few pages further he says that of the opinions of Pythagoras we know even less than of his life 3). Should we, then, state categorically with Erwin Rohde that we know next to nothing of Pythagoras 4)? Is Burkert correct in assuming that Pythagoras, the scholar and philosopher, is, in the last resort,

nothing more than a projection of the Pythagorean tradition 5)? Questions such as these will concern us here. One must concede from the start, however, that there will always be an element of conjecture, even of anachronism, in dealing with persons, events and opinions in a period as remote as the one we are considering, lying as it does between the sixth and fourth century B.C. 6).

2. The kernel of the historical problem

From antiquity we have inherited three biographies of Pythagoras, all three in Greek. One is by Diogenes Laertius 7); one by Porphyrius, whose >>vita<< actually is the last remaining fragment of his History of Philosophy 8); and one by Iamblichus 9). The first two of these authors lived in the second century A.D. 10). This means that they wrote at a distance of at least eight centuries from the subject of their studies. This may already cause us to doubt the historical reliability of their writings. These doubts do not diminish, if we realize that of these three, Porphyrius and Iamblichus, neoplatonists as they were, were late admirers of Pythagoras; they are writing hagiography rather than history 11). They perceived their hero as at the far end of a long tunnel, through thick layers of Pythagorean and Neopythagorean tradition and legend, with its endless adjustments and reinterpretations, and they have imparted him not a few of the traits of the invented Pythagoras-figures of later ages.

They had yet another reason to give their predecessor an almost superhuman dimension. Iamblichus and Porphyrius were thinkers living in the centuries of the irresistible rise of Christianity, and they wanted to stand their ground manfully on the barricades of paganism. And in their struggle they saw themselves compelled to reckon with the fact that for the Christians Jesus of Nazaret was the Messiah, the predicted bringer of eternal salvation, the God-man in whom time and eternity, heaven and earth were united. It is no wonder then that a late Pythagorean wanted to give his hero also some of these supernatural gifts, to make a prophet of him, a

miracle worker, a founder of a religion, and to see in him a man who was equal to the gods. But then the question arises whether we can presuppose any substratum of historical fact in the fantasies.

3. The reliability of the literary tradition

The fact remains that between the three late authors there exists a fair amount of consensus 12). They are agreed that Pythagoras lived in the sixth century B.C., was born in the island of Samos, reached a great age and spent the last part of his life mainly in the city of Croton in Southern-Italy. The differences between their works show that they cannot simply have copied each other. The obvious conclusion is that their works are based on common older sources, at least for those facts on which they agree. Furthermore, there certainly existed older sources, because they are not only cited by them, but by others also. Apart from biographical works, philosophical books also allude to Pythagoras. It is bad luck, of course, that nearly all these older works have reached us only in a fragmentary state; most of them have disappeared without leaving any trace behind them.

From Pythagoras' biographer Diogenes Laertius we can trace back the literary tradition to Polybius, in the second century B.C.; in his >>Histories<< he mentions the Pythagorean movement in Croton. This is extremely important, because Polybius is generally considered a very reliable historian. Polybius' source was the >>Histories<< of Timaeus, a Sicilian historiographer (ca. 356-260). His work has disappeared nearly completely, but we know that he had something to say about Pythagoras and his school 13). He was, moreover, a contemporary of the Pythagoreans of the fourth century B.C. We know also that two members of the school of Aristotle, Dicaearchus and Aristoxenus, have written >>vita<< of Pythagoras; these again are not extant, we have only a number of quotations in other works 14). These quotations are, however, important. According to Von Fritz, Aristoxenus is very reliable with regard to the fortunes of the Pythagoreans in the period after 450 B.C. 15). In that time the

last of the Pythagoreans had taken refuge in Greece proper, and it is very possible that Aristoxenus had known some of them personally - for instance, Eclerates, who is mentioned by Plato in his >>Phaedo<< and who must have been born shortly after 400 16).

It is irreparable bad luck that Aristotle's book on the Pythagorean doctrine has been lost, but nevertheless he is our most important witness, because he mentions Pythagorean ideas in several of his works 17). This is equally the case with Plato, who regarded Pythagoras as a great and inspiring example; indeed, in some important respects Platonism and Pythagoreanism resemble each other closely 18). Plato and Aristotle both take the existence not only of the Pythagorean movement, but also of Pythagoras himself as historical. But who was their source? Probably Philolaus who, about 400 B.C., was the leader of a late Pythagorean school. From him we have twenty fragments, but the authenticity of these is a subject of hot debates. Raven, for instance, does not consider one of them authentic 19). But there are still older witnesses. As De Vogel points out, there is much more evidence than sceptical authors want to accept 20). The oldest Greek historian, Herodotus (ca. 484-420), mentions >>Pythagoreans<< and >>Pythagoras, the son of Mnesarchus<< 21). We find his name and some of his doctrines too in the fragments of some early philosophical works 22). Of extreme importance is the testimony of Xenophanes (born ca. 570 B.C.), because he was a contemporary of Pythagoras and lived the greatest part of his life in the island of Sicily where Pythagoreanism flourished. It is true, says De Vogel, that the testimony of these earliest philosophers does not amount to much 23); but the salient point is that they see Pythagoras as a historical person, often a contemporary, who raised matters of spiritual importance. And it is, of course, not safe to neglect the evidence furnished by contemporaries and by scholars of the next generation after them.

4. An outline of Pythagoras' life

Pythagoras lived in the sixth century B.C. and saw the light in the

Greek island of Samos. This is now an integral part of the Greek republic, but situated as it is in the group of the Sporades, it is an outpost of modern Greece, at not more than 900 yards from the Turkish coastline. In Pythagoras' days, however, its position was far more central in the Greek world. The great Greek colonization had already come to a stop by then. Since 1900 B.C. the Greek tribes, coming from the Balkans, had penetrated Greece proper, in successive waves, as a part of the migration of the Indo-European tribes in search of more fertile territories. They had continued their advance over the archipelagos in the Aegean Sea, had conquered Cyprus and had settled in a broad strip, from north to south, along the Eastern coast of that sea, making it thus into a Greek inland sea.

In the eighth and seventh centuries the Greeks again swarmed out, to nearly all the coasts of the Mediterranean and the Black Sea. Their most important territory of colonization was Southern Italy (with Sicily), so densely populated with Greeks that it used to be called >>Greater Greece<< or >>Magna Graecia<<. And there stood Croton too, Pythagoras' second fatherland. In this immense Greek world he had travelled from one end to the other. It bordered on and stood open to many other empires and cultures, which were to influence the inquisitive, trading and adventurous Greeks. It was a world which had not yet found its final, its >>classical<< form. That would only be the case after the Persian wars and as a result of these wars, when the Greeks had acquired a new self-assurance and knew themselves to be better than their >>barbarian<< surroundings. But then, in the sixth century, Greek culture could undergo foreign influences still more easily, and one of the pertinent questions about Pythagoras is whether he is not more an exponent of Eastern ideas than an original Greek thinker.

The political situation in the sixth century was roughly as follows. The archaic Greek world had long since disintegrated. Kings and knights had had to abandon much ground to the new class of industrious commoners whose wealth could not be summed up in landed

property, but in goods, ships and money. The kings had been replaced, not by the people, but by tyrants (autocrats) 24). We find the same pattern in Samos, at that time an independent state, where the king had ceded his place to the nobility and where, about 540 B.C., Poly-crates got into power for many years. He was a man who had checked back the political influence of the landed gentry and advanced trade and shipping powerfully and with success.

The unremitting social struggle, the sense of living in a time of transition, of experiencing radical changes which were not understood very well and not always appreciated, all this led to feelings of insecurity, fear and guilt. The great Olympic pantheon, with Zeus at the top, had been the world of the Greek gods since the famous Homeric poems of the eighth century, the >>Bible<< of Hellas, but now it became the target of critical reflections, even of mockery. Homeric heroes had not been worried by feelings of guilt, but now there arose other religious needs. The official gods were sometimes seen as too frivolous; some people wanted a deeper, a more earnest religiosity; they were in need of a >>katharsis<<, of >>purification<<.

And in all this unrest and doubt there was room for strong personalities, for a Polycrates for instance, a builder and ruler, and not the least of the many tyrants of this age. There was, perhaps, even more demand for religious leaders who showed a new way, a way out, for a Pythagoras especially. Polycrates and Pythagoras together in the same town on the same island! No wonder that they got into conflict 25).

There is no agreement on Pythagoras' date of birth and the duration of his life. He may have been born in 589 B.C. and have died in 490 26), in which case he would have reached the extreme old age of a century less a year. This is possible, but, for other reasons too, not probable 27), and therefore some prefer a shorter chronology. He would then have been born in 570/569 B.C. and, having become eighty years old, have died in 490 or still earlier 28). The fixed date in this changing picture is the arrival of Pythagoras in Croton, generally agreed as 530/529 B.C.

Of Pythagoras' youth we know next to nothing, although there is

no lack of legends 29). We have no certainty about his father's name; perhaps he was called >>Mesarchos<< 30). Probably he was a merchant and able to give his son a good education 31). If this is right, then Pythagoras sprang from the upward striving and enterprising upper middle class of Samos. Is there any truth in the report that >>Mesarchos<< was a Phoenician, an immigrant from Tyros, but his wife a born Samian, so that their son was only partly a Greek 32)? All one can say is that from antiquity till our own days there have been continual attempts to connect Pythagoras with the Middle East.

The young Pythagoras made a few voyages through the Greek archipelago, perhaps on a ship of his father or with his father. During one of these trips he met the ascetic philosopher Pherecydes, a native of the island of Syros, who lived mostly in Samos, where he has died. This remarkable man is cited by early authors as the first teacher of Pythagoras. Because it is possible that Pherecydes exercised a great influence on the gifted young man, especially as to the theory of numbers and the doctrine of the migration of souls we shall return to this subject in Chapter II.

Even the most critical modern biographers accept that Pythagoras stayed for a time in Ionia. This is only to be expected. Ionia, the central part of the Greek settlements along the western coast of Asia Minor, lay just opposite Samos (which island is indeed a part of Ionia); from the hills of the island one could almost see the great Ionian metropolis, Miletus, its commercial and industrial centre (28 miles a the crow flies, in the direction of the South-East). In the sixth century B.C. Miletus was also the most important intellectual centre of the Greek world; in this town the first scientists, the oldest philosophers of the history of the Occident, who formed the >>Milesian school<<, were the teachers of studious young men who thirsted after knowledge and truth. In this region the Greeks had left their feudal past further behind them than in any other Greek community, and it was here in Ionia, according to Philip 33), that Pythagoras matured. In Miletus he followed the lessons of Anaximander (ca. 611-547) 34), and made the acquaintance

of the most famous of all these scholars, Thales, the father of all philosophy (ca. 624-ca. 545), an old man already and no longer fully active; the young visitor from Samos, then about 23 years old, was much impressed by this celebrity. It is far from easy to answer the question how these Milesian scholars influenced the development of Pythagoras' own ideas; later in this work we shall examine whether the Milesians had some influence on the mathematical, cosmological and philosophical notions of their pupil, and if so, how strong it was.

The next period in the life of Pythagoras is shrouded by a thick fog; it is that of his travels to Egypt and Babylonia. In the long chronology of his life they cover a period of 22 years, and in the short one of nine. It is true that educated Greeks used to travel extensively; we know for instance that Solon and Herodotus stayed many years in foreign parts and visited the countries of the Middle East. On the other hand, it was fashionable to refer to the wisdom of ancient Egypt; Plato, for instance, claims that his Atlantis-myth originates in Egypt. In ancient biographies travel is only too frequently associated with the fabulous, and it is possible that late Greek authors wanted to fit the life of Pythagoras in a generally accepted biographical pattern. The problem is not without importance, because according to some sources Pythagoras picked up some of his central ideas in Mesopotamia. It was, they say (but many modern scholars see this as extremely doubtful), a magician of the Zoroastrian religion who taught him the notion of ritual purification, and especially the fundamental idea of cosmic dualism - 'the essence of all things' 35) - that there exist two deities, a good one and a bad; the bad being the generator of all life on earth, the good the creator of the >>psyche<<, the cosmic principle of life 36). If this is true, then Pythagoras would have come into contact with Persian dualism.

What is certain is that Pythagoras with his youth and his years of study behind him, returned to Samos around 533 B.C. Our sources say that he founded there a school for mathematics and philosophy, although the hard-working and bustling Samians did not show much

interest in it 37). It is possible that Pythagoras visited Crete and Sparta in the same period. In Sparta he came to know private communities of men, governed by rigid rules, with an ascetic life-style; something of this we may find back later in his own fraternity. Why he left his native island again after some years, in 529 B.C., we do not know with certainty. Did he collide with the tyrant Polycrates, or was he, on the contrary, drawn too much into public life, as Iamblichus tells us 38), or are these two sides of the same coin? Anyhow, his departure was a decisive event, a turning point in his own life, and one of the most important dates in the cultural history of Europe. When Pythagoras arrived in Croton in Southern Italy, in 529 B.C., he was already sixty years old, according to the long chronology, but only forty and therefore in the prime of his life according to the shorter and more probable chronology.

Since Cyme (Cumae) had been founded near Naples, ca. 750 B.C., the first Greek colony in Southern-Italy, scores of others had followed suit, and >>Magna Graecia<< had come into being, where everywhere the Greek language was spoken, and where even nowadays one may meet native Greek speakers who are Italian citizens. The town of Croton, the Croton of today, an Achaean colony founded in 710 B.C. and situated in the South of the heel of the boot, was certainly not the least of the Great-Greecian cities. But it was not the biggest, for it was surpassed by the town of Sybaris (the luxurious life of her inhabitants has remained proverbial!) - the existence of a >>Crotonian empire<< in this period, as conjectured by some scholars, is quite out of the question. Shortly before Pythagoras arrived there the town had suffered a heavy defeat in its war against Sybaris, and seemed to be somewhat in decline 39). De Vogel supposes that Pythagoras choose Croton as his new abode, because under the circumstances the town seemed ripe for a new leadership 40). In a very short time Pythagoras succeeded in bringing all classes of the population under his influence. He founded here the first of the so-called >>Pythagorean fraternities<<. Although he never became a member of the city council, he nevertheless exercised a real power in the town. For as the unchallenged and venerated leader of the >>homonoia<<, that

fraternity of influential and often ambitious personalities, he was able to put his stamp on the way of life of the citizens of Croton, on their religious orientation, and also on the politics of the city. We shall never be able to state exactly how great a part Pythagoras had in the national recovery of his new fatherland 41); although Gorman says that it never was his principal aim to possess political influence 42), his words and deeds must, nevertheless, have had political repercussions. It is probably no accident that just in this period the city rose to a new prestige, that she defeated her old rival Sybaris in 510 B.C., and that after this a South-Italian federation was formed, under the hegemony of Croton. We have evidence of this federation which existed till 450 B.C. from the so-called >>alliance coins<< 43).

It is, of course, implausible that Pythagoras would have enlisted the adherence of all Crotonians; for a good many of them his doctrine and his way of life must have been too severe and exacting. Not a few have reacted to the influence of the fraternity with growing displeasure, while the political standpoint of Pythagoras and his adherents would not have been to the taste of many citizens. The best authorities are of the opinion that the fraternity had a strongly conservative character and that it supported the existing order of things which in that region still had an evidently aristocratic flavour 44). But the rising democratic and populist forces began to rebel against the Pythagorean rule. The immediate cause seems to have been that after the victory on Sybaris the nobility of Croton refused to parcel out the conquered land proportionally (i.e., with the noble citizens). We have no clear picture of what happened then. The biographers have perhaps left this series of events somewhat in the dark, because it has not exactly been the culmination-point of Pythagoras' life. What we do know is that under the leadership of a certain Cylon the democratic elements revolted and killed many Pythagoreans. Pythagoras himself, who just at this moment was probably not at Croton, established himself at Metapontum (Metaponto), a city far to the north of Croton in the bay of Tarente. He never returned, although the Pythagoreans succeeded in coming to power there again.

Possibly he busied himself, from Metapontum, with the many Pythagorean fraternities that since his coming to Croton, now twenty years ago, had been founded in Southern-Italy. He died in Metapontum in 490 B.C., the year of the battle of Marathon.

5. The Pythagorean fraternity

The life and doctrines of Pythagoras contain many elements that are of the utmost importance for our subject. The first of these is the foundation of a fraternity with a private and more or less secret character. At all points along the lifeline of dualism (and of gnosticism its bloodbrother) we find such societies with religious and mystical features, elitist clubs which admitted new members only after the most strict balloting, full membership becoming possible after a long probationary period; they were associations that knew gradations of the more and the less initiated (and outside them the not initiated). The proof of their strictly private character was that they kept their teaching to themselves and did not divulge it to outsiders. In a word, they were >>esoteric<< associations.

My earlier warning becomes again valid at this point. A certain anachronism is unavoidable in the description of the oldest Pythagorean fraternities, because there are no contemporaneous sources; later Pythagorean authors could no longer distinguish what was original and what was a later development. But it is not rash to assume that Pythagoras' own fraternity in Croton served as a model for later ones; we may safely say that a common fundamental pattern underlies all the fraternities. It is to be expected that these conservative-minded associations stuck carefully to their traditions 45).

Let us start with the contention of Philip that there never existed a >>fraternity<< or >>school<< or >>order<< whatsoever 46). But almost without noticing it himself he retraces his steps by declaring that there may have existed Pythagorean leagues with political tendencies in the fifth century. Next the so-called >>symbola<< cause him difficulties, the >>signs<<, many of which are

clearly so old that they may easily have Pythagoras himself as their originator; these >>symbola<< were evidently part of a set of life rules. Philip's conclusion is that, if a Pythagorean fraternity existed, these >>symbola<< must have been part of the rules, and that these rules must have been devised by Pythagoras himself 47). This is a nice specimen of the scepticism of the sceptics 48). Why should it have been impossible that a strong personality like Pythagoras assembled disciples and adherents around him and organized them in one way or another? The Greek world has never been short of associations and of political clubs 49).

But now a problem arises. Was the Pythagorean fraternity of these early days a political club? For some scholars Pythagoreanism is only a primitive religion; they pay no attention to its social and economic aspects 50). Von Fritz, who looks upon the >>order<< as a tightly organized and centralized whole, with an influence far outside Croton, thinks that there never existed a >>direct rule<< of Pythagoreans; never, he says, did Pythagoreans come to power as Pythagoreans. At this point he makes a comparison with Freemasonry in the eighteenth century 51), and I myself feel inclined to think of the influence of >>Opus Dei<< in Spain. But why then, as Minar points out, did Aristotle speak about >>so-called<< Pythagoreans 52)? He must have used this singular expression, because he knew that he was not describing a normal philosophical school or a religious congregation! Of course the order was not a political club of the common run, yet although the fraternity as such did not exercise direct political power, many of her members did, and as good Pythagoreans they exercised the power they had according to their special views 53).

Most of the members of the fraternity came from what is called >>high society<<. Croton was a town where the old landed gentry had held its own fairly well; the new Pythagorean movement associated itself with this social class which felt itself menaced by democratic parties elsewhere in Southern-Italy 54). To become a member one did not need to be a nobleman, and, indeed, the word >>fraternity<< is also somewhat misleading, because it seems that women could be

members too 55). But it was not at all easy to earn the membership, and still less to be admitted to the highest grade. High demands were made upon the character and the behaviour of the neophytes, they had to show a great self-control and be taciturn 56). Silence was imposed upon them for a period of five years, but it may be doubted whether this was an absolute rule. This duty was the preparation for the injunction laid upon all members, to remain silent about the mysteries the Master had taught them in order to protect them against profanation 57).

This duty to remain silent about their secrets is part and parcel of all esoteric societies. But now for the first time our attention is drawn to the separation that is indicated in this way between the sacred and the profane, for the sacred words and rituals were not destined for the eyes and ears of the not initiated. For those who became full members there existed two degrees, the >>akousmatikoi<< and the >>mathematikoi<< 58). The akousmatikoi had to live according to the rules as well as they could, but they kept their own possessions and lived in their own houses; their title which means >>hearers<< shows that they were considered as being of a somewhat lesser order 59). They had to come often to the >>homakeion<<, the main building of the fraternity, in order to be fortified in their intentions by the intercourse with the really initiated, but most of all by the lessons of Pythagoras himself. According to a report by one of the old biographers 60) the Master sat hidden behind a curtain while he spoke to them. Even if this were not true, the meaning is clear: he did not belong to the sphere of the profane. The >>mathematikoi<< were admitted behind the curtain, because they were in full possession of the >>mathesis<<, the doctrine. They renounced all their personal possessions and lived in common ownership in the main building.

They were in duty bound to an extremely frugal existence; their diet was presumably vegetarian - but during sacrificial meals they partook perhaps of meat - and consisted of bread, honey and vegetables 61). It must be pointed out here that a predilection for a food different from that of other people and especially for a vegetarian way of life is likewise common to esoteric, dualistic and

gnostic communities.

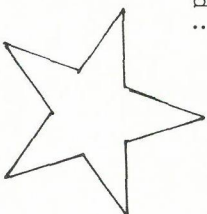
Iamblichus has described their order of the day extensively (62). At dawn they rose and put on their snowy white garments, as white as their bed-clothes (63). White is, of course, the colour of the purity they aspired so much after. Then they made their morning walk, in order to bring their spirit into harmony with nature, while they went about meditating; by choosing lonely paths they sought to avoid unwanted encounters with >>common<< people, for that would unsettle their psyche again. How ever much the Pythagoreans may have talked about fraternity and love of mankind, this trait betrays a certain contempt of people and an unmistakable self-exaltation. After their exercise there followed a spell of study and moral deepening and also of tuition to others, and after this a period for physical exercises. Their lunch consisted of bread and honey, without wine. The afternoon was destined for mundane affairs and was usually spent outside the building and in town. At the end of the afternoon they had their bath, which had also a ritual significance, for it served to wash away the profane affairs of the day. Their common evening meal offered them bread, vegetables and wine, seldom fish, and sometimes some sacrificial meat. The youngest at the table read some edifying pages to the others. They offered a libation to the gods, they prayed, they went to bed (64).

6. Pythagorean signs

The first thing to be made clear is the significance of the number three; the role of this number is manifest throughout all the history of esoterism and mysticism. In communities of this kind we discover a twofold partition in three : 1. into outsiders (to whom at least formally also the neophytes may be reckoned), *acousmatici* and *mathematici*; 2. into neophytes, *acousmatici* and *mathematici* (65). In the Pythagorean speculations on numbers, 3 is the first real number; 1 and 2 are the >>roots<< of all other numbers, their father and mother so to say, and the first number that comes into being out of 1 and 2, out of their conjugal alliance, is 3. Therefore this number

has a very special meaning. To us who handle numbers in a totally different way, this may seem a very primitive line of thought; nevertheless, the Pythagorean conception represents a late stage and is already a rationalization of much older views. It is well-known that three is a very ancient sacred number, perhaps because it reflects the essential human trinity : man-woman-child, but perhaps too because the phases of the moon are three in number, the waxing, waning and full moon (which makes the moon resemble a living being that is born and dies).

One may safely suppose that such an uncommon, well organized and easily distinguishable fraternity like that of the early Pythagoreans must have had its own special sign. Indeed the sources mention an old Pythagorean symbol, the >>pentagram<<, the five-pointed star, of this kind :



It is to be noted that this symbol does not consist of two triangles that are worked into each other. There is no doubt that this is a very ancient symbol and that the Pythagoreans used it. But not only the Pythagoreans, says De Vogel. Thus when during excavations utensils are found with stars like these, we must not immediately assume the historical existence of a Pythagorean community in that region. As a magical symbol it is spread far and wide; it is found in gnostic circles, among the neoplatonists and neopythagoreans, very frequently in the Middle Ages, and among the gypsies today. It is a curious thing that even big concerns like Caltex use it as their trade mark, and it decorates the flags of a great many states (66).

I must add to this something extremely remarkable. During World War II the greater part of Europe was dominated by the pagan sign of the swastika. But were we delivered from this by the Christian sign of the cross : "Under this sign you shall gain the victory!" (67)?

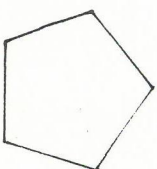
By no means! The armies that marched from the East were adorned by the Soviet-star, exactly the same star as the pentagram, and the armies from the West who beat back the German hosts, also marched under the sign of the five-pointed star, again exactly the same symbol. This sign must therefore have quite another significance than an innocent recommendation for fuel or beer.

There exists an explanation that wants to see a >>pentalpha<< in the pentagram, five interconnected (Greek) capitals A (alpha). Now the A is the initial of >>Areté<<, virtue, and the five A's are said to represent the five cardinal Greek virtues, piety, valour, wisdom, justice, temperance (68). This explanation clearly belongs to a worked-out ethical system, and strikes us as being >>literary<<, somewhat artificial or a later construction. We simply cannot accept this as an explanation of a symbol so ancient. Goettling himself, whose explanation this is, adds indeed that the pentagram is the symbol of >>soul<< or >>health<< (hygieia). Some scholars are therefore of the opinion that it is an old Egyptian sign, a hieroglyphic for >>skeleton<<, the bearer of the human body (69). Indeed the five-pointed star occurs in Western-Europe during and after the Renaissance as a symbol of health, for instance, on the coat of medical guilds (70). A Greek author in the second century A.D. tells us that the Pythagoreans - Pythagoras himself, he says - did not greet each other with >>chairein!<< (=welcome) or with >>eu pratein!<< (=do well, may you prosper), but with >>hygiainein!<< (=be healthy), and the pentagram they called >>health<< (71). In the Basel museum there is an alabaster disk with a pentagram in it, at every one of its five points is written one of the letters of >>XGIEIA<< (72).

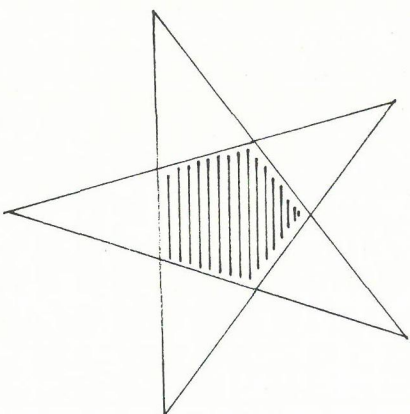
It is probable that Pythagoras himself has attached this meaning to the five-pointed star. Preoccupation with (physical and mental) health is one of the characteristics of esoteric and dualistic movements. Did Pythagoras or his early adherents invent this symbol themselves? The fact that it is or seems to be a star may point in this direction, because the starry sky had a great religious significance for the Pythagoreans. But is it really a star? De Vogel thinks it is. She is of the opinion that the five-pointed star in

Babylonia had the force of a talisman, a symbol that could avert evil; here too it was used as a symbol of health. It might have had an astrological origin (73). Pythagoras may have become acquainted with it during his stay in Babylonia. There it is an extremely ancient symbol: twice it appears on the neck of a Sumerian ewer of ca. 3000 B.C.; it is not known what this symbol means here (74).

Perhaps, as Stapleton maintains, it is originally the imprint of a hand. If one finger is pressed into the wet clay of a writing tablet, the result is a point; if two, a line; if three, a triangle; if four, a square; if five a pentagon. As a matter of fact all our measures have been deduced from the hand or the arm, and, in general, from the human body, like the ell, the span, the hand's breadth, etc. At the same time we have here the elementary beginnings of geometry, and it is possible that this appealed to the mathematician in Pythagoras. If the five outspread fingers are placed with their tips on clay or wet sand, then the result is a pentagon:



, and if the lines are lengthened, then the outcome is the five-pointed star:



Perhaps this sign that is a hand that becomes a star, was used to obtain the protection of some god. For the gods of Mesopotamia were celestial deities. The hand is a well-known symbol of seizure, of possession, of protection and the exercise of power. We too still know the meaning of >>the hand of God<< (75).

7. Pythagoras shaman or scholar?

All this suggests that it is far from impossible that Pythagoras became acquainted, maybe in Babylon, with a mysterious, a magical sign, to which he gave a significance of his own; he made it part of his personal existence and introduced it into the Greek world and its culture. This may lead us to the important question : who or what was this Pythagoras actually? Burkert wants to see in him only a >>witch-doctor<<, a typical wandering >>shaman<<; the kind was not unknown in ancient Greece. He denies to Pythagoras any share in the origin of rational philosophy and science : of this we have no testimony at all, according to his opinion (76). Burnet too thinks that we have every reason to see in Pythagoras a common witch-doctor, with all the unfavourable connotations attached to this word - although, as he goes on to say, since Pythagoras had important ideas about >>purification<<, >>migration of souls<< and >>rebirth<<, the term >>witch-doctor<< is no longer really relevant (77). We must not neglect the religious and ethical component in Pythagoras. Then again there is the venerable tradition that ascribed to him the famous theorem, the joy of every schoolboy. Since ancient times, people have wanted to see in him a scholar and a mathematician.

At the beginning of his highly critical book Philip laments that we tend to see in Pythagoras everything we want to see in him, from an old shaman to the first Greek mathematician (78). This is not without truth. A term like >>shaman<<, however, needs some comment. It has been borrowed from cultural anthropology and has been attached to Pythagoras in recent days; it comes to us from far northerly civilizations, in the regions of the polar circle. We shall meet shamans in other chapters of this book too. For the moment it is

sufficient to say that a shaman is a soothsayer, a purification-priest, a miracle-worker (79).

Certainly Pythagoras had a great reputation as a miracle-worker (80). To cite one example. He was seen on the same day in two far distant cities, Metapontum and Croton (81). These legends are doubtless very ancient; Burkert thinks it is possible to detect them in the oldest part of the Pythagoras-tradition (82). The legends even went further : there were rumours that not >>Mesarchos<<, but Apollo was the father of Pythagoras (83). He himself did not contradict such rumours; on the contrary, he made good use of them. He is reported to have been in the possession of a >>golden thigh<< - perhaps a large gold-coloured birth-mark on his hip (84) - which he sometimes showed to his adherents. This is said to have been an unmistakable sign that he was a son of Apollo, or even, who knows, Apollo himself (85).

Could it be possible that such a miracle-worker, such a shaman, was at the same time a man of science (86)? To people of modern times this seems incredible. But we are now in the sixth century B.C., and this is an important part of what has been called by Karl Jaspers the >>Achsenzeit<<, the period in which world history made a turn around its axis (87). This turnabout means, according to Jaspers, that reason (logos) rather than myth was invoked to explain all difficult phenomena. The Greek word >>logos<< has, among others, the meaning of >>explanation<< (and of >>proportion<<). Nestle whose book is called >>from mythos to logos<< outlines the development like this. Myth is something involuntary, it creates and gives form from the unconscious; logos, on the other hand, is consciously analytic and synthetic. The mythical presentation, which had been since time immemorial the only one, was characterized by the complete lack of will to compare myth with reality; it made no distinction between appearance and substance. The anti-rational element in myth has always been combated by logos inexorably; logos is not only critical of mythical presentations, but also of mythical institutions, like religion. The problem is that logos is not able to explain everything, there will always remain something irrational;

and this is the reason why myth can exist and flourish in a logical period 88). The author concludes that this process, marking the transition from the >>medieval<< to the >>modern<<, is intrinsic to all higher civilizations 89).

Thus Pythagoreanism stands at the crossroads of two ways of thought and constitutes the transition from mythical to rational thinking 90). In the sixth century B.C. this transition was still in progress, and therefore the religious and the rational elements still form a unity in Pythagoras himself and in his early adherents 91). Guthrie is in fact ready to acknowledge Pythagoras as an original philosopher, as the founder of the discipline of mathematics and as the framer of a philosophical cosmology 92). He admits that direct evidence is lacking here, but, as he says, one has to accept this as the only reasonable explanation for the unique impression his name has made on thinkers and scholars of later times 93). We must also point out that this curious mixture of the mythical and the logical, of the fantastic and the scientific, of the arbitrary and the rational, of >>mathesis and mystics<<, is proper to the esoteric way of thinking of all times and to all gnostic-dualistic movements.

8. The philosophical cosmology of Pythagoras

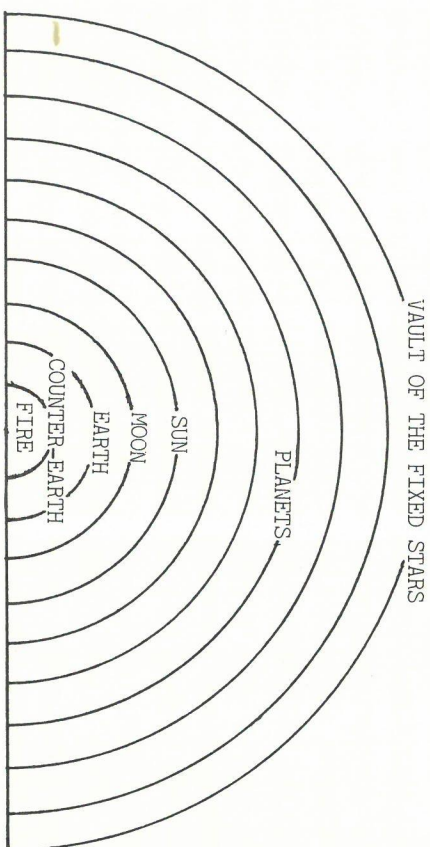
When we ask ourselves what it was that Pythagoras taught, it becomes evident at once that he possesses a world picture of his own, called by Guthrie his >>philosophical cosmology<<. This will prove to be of the utmost importance, because in this cosmology astronomy, religion and science will meet each other 94) and will go hand in hand for a very long time, even to the dawn of modern science. At first there is nothing dualistic at all in the notion of >>cosmology<<. >>kosmos<< was a key-word of the Pythagoreans, and Pythagoras seems to have been the first to use it in the sense of >>universe<< 95). The original meaning of >>kosmos<< is >>ornament<<, but soon it meant also >>ordered succession<<; the universe, it is contended, is all order and beauty, all living things form a unity, and the human soul is one with the whole universe. The universe is a >>teleion<<, it has

a purpose, which becomes evident from the regular movements of the celestial bodies. But here already a first shadow is falling over this clear picture : the cosmos is limited, final, it moves or hangs in the unlimited. In addition to this this universe is also a non-universe, with quite another aspect. We shall have to return later to the terms >>limited<< (>>peras<<) and >>unlimited<< (>>âpeiron<<), because they are an antagonistic pair, not without dualistic traits. In order to get a clear idea of the Pythagorean and even of the whole Presocratic world picture we shall have to free ourselves from Plato's conception that the cosmos is divine. For his predecessors the cosmos as such is not divine. From the outside it is penetrated by something divine, but the further this element of divinity descends through the successive >>spheres<<, downwards, i.e. to the earth, the more it mingles with the (physical) elements, and this makes it more and more impure. Between the cosmos and divinity proper there exists a certain opposition, according to Guthrie, so that we meet here with an essentially dualistic characteristic 96). It is abundantly clear therefore that the cosmos does not contain the whole reality : outside it and round about it there is yet something else, something pure and unmixed, of a much higher order than the cosmos itself 97).

The Pythagorean cosmology is an original creation. It is true that Pythagoras may have learned a great deal of astronomy from his teachers in Miletus and during his stay in Babylon 98), but to call this direct borrowing would not be correct, because this South-Italian cosmology displays many characteristics proper to it alone. The cosmos starts from Unity, a little seed, so to say, that is sown into the Unlimited. In consequence, the Unlimited constricts itself, and the Limited comes into being, to be provided with a structure of numbers. The next stage is that the cosmos expands from the centre outward, although this centre, consisting of fire, always remains identifiable.

Not only this organic way of putting things in terms of the seed of the cosmos, its expansion, and the further idea, moreover, that the cosmos breathes, is of particular interest; equally note-

worthy is the notion that the earth does not stand in the centre - it turns around this central fire. None of the other Presocratics had this singular notion 99). The number of the heavenly bodies is greater too than the famous seven, the sun, the moon and the five planets that can be seen with the naked eye, which we meet everywhere in the Ancient Near East and which are the origin of our seven weekdays and of their names. The Pythagoreans believed, rather, in ten heavenly bodies, because they added to the seven accepted ones not only their central fire and the firmament of the fixed stars, but also a >>counter-earth<<. How they pictured this >>counter-earth<< to themselves is by no means clear. It looks very much like an artificial construction, because the Pythagoreans wanted to arrive at the number ten which was for them a mystical number. It constituted no difficulty for them that we cannot see the counter-earth (and the central fire), since our side of the earth is turned away from it. The following diagram will give us a basic idea of the Pythagorean cosmos :



In the construction of the cosmos we may detect a very clear dualism. According to the Milesian scholars, with their monistic systems, all earthly and celestial phenomena obey the same laws and they are all made of the same (primary) material. But the Pythagoreans did not see it that way. For them there are two distinct mechanisms, one of the heaven, the other of the earth; the dividing line between them is the sphere of the moon. The sun, the moon and the five planets are made of pure fire or of >>aether<<, the >>quintessence<< or fifth element, which is something else and something far superior to the four well-known elements : earth, water, air and fire. The celestial bodies of the upper sphere are completely unmixed, they do not change, they are eternal and incorruptible, they constitute a perfect world 100).

As I said already, the frontier line between this admirable, incredibly beautiful upper world and the rest is the sphere of the moon. Beneath the queen of the night lies the >>sublunary<<, a word that still has a connotation of sadness for us. For here below all bodies and material things are of a mixed constitution, they all contain parts of the four elements. This is a mixture that is fundamentally unstable, because these elements can blend into each other, owing to differences in temperature or under pressure. They come into being, they decay, they are always changing; there is no stability in the things of this earth 101). Evidently this is a pessimistic vision on world and on man - a vision that is characteristic for all dualistic movements, even if their world pictures differ.

9. The >>harmony of the spheres<<

What is authentic, real and essential in the functioning of the cosmos does not happen here below, in this sublunary world, but in higher regions which as yet remain closed for mankind. This is also implied in the doctrine of the so-called >>harmony of the spheres<<, that, according to a sharp-witted remark of Taylor, might be termed, more appropriately, the >>music of the celestial bodies<< 102).

According to Pythagorean teaching the great celestial bodies produce among themselves a cosmic music, because each of these >>planets<< emits a melodious sound during its revolutions 103), in consequence of the fact that, on account of their bulk, they meet with some resistance in travelling through this rarefied upper air. The orbital velocities of the planets are in a fixed proportion to one another according to a mathematical ratio, and this again corresponds with the intervals on a scale. The result of all these movements is a >>symphony<<, an incomparably beautiful consonance. The objection of level-headed people that they hear nothing at all is refuted with the remark that as this music has been with us since we were born, we can have no experience of the cosmic silence that would make us conscious of the harmony 104).

This celestial music is infinitely superior to all our earthly music. Pythagoras increased the veneration people already cherished for him by claiming that he, and he alone, could hear this cosmic music; by an immense effort of concentration he succeeded in immersing himself in the heavenly sounds 105). Earthly music is an imitation of these transcendental melodies, and therefore it means much more than amusement or embellishment. Both our earthly music, imperfect as it well may be, and the perfect transcendental melodies, are manifestations of the harmony and order prevailing in the cosmos. For the Pythagoreans this concept of harmony was of central importance; with his action in Croton Pythagoras has certainly meant that this city should reflect microcosmically the macrocosmic order; in a miniature way it should reproduce the great harmony of the universe 106).

10. The Pythagorean theory of numbers

The >>rational<< basis for the doctrine of numbers is to be found in the Pythagorean theory of numbers : order and harmony are founded on the relations between numbers 107). Numbers are so important for Pythagoras that one can safely say that reality is present in, exists in and is expressed by mathematical number. According to

Burkert numbers in the Pythagorean doctrine have four functions 108). First, number functions as a mathematical formula; second, number functions as a means to order things, as an expression of order. So far, so good. One begins, however, to feel slightly uneasy on learning that the third function of number is to stand as a symbol for the concepts of ordering, perhaps one might say, as the >>archetype<< of all concepts of cosmic order. This does not mean that, as modern physics teach us, the world can be described as a relation of numbers, no, it means that from the One, the number 1 therefore, the whole universe originates 109). According to this view there are primarily two kinds of numbers : the number 1 and all the others. For the Pythagoreans, then, the number system is virtually identical with the structure of cosmos.

With the fourth function, however, we feel completely at a loss, and not we alone : Aristotle too did not understand much of it 110). This fourth function postulates number as an indication of space, or more exactly, number as something spatial itself, even as something that is almost material. For if reality may be rendered by numbers, then irrevocably numbers will be seen as objects. It is difficult for us to follow the Pythagoreans on this road. Why for example is 3 a masculine number and 2 a female one, so that their sum, 5, is the number for >>marriage<<? That numbers possess a >>shape<< becomes somewhat clearer to us, if we notice that 1 (one point) is a point, 2 (two points) a line, and 3 (three points) a surface (a triangle). 3 is the first number that contains unity (1) as well as plurality (2), it has a beginning, a middle and an end (.+.+.). It therefore resembles the cosmos and must be regarded as its soul. So the Pythagoreans argue.

In many civilizations the number 10 has a special significance, because it is the highest number one can count on one's fingers : it indicates therefore a plurality of a special sort as well as a limit. It is impossible to go beyond 10; our numerical system too is a combination of unities and decades. Add to this that in the Pythagorean numerical symbolism 10 is the smallest number that can be

made up equally of prime numbers and of composite numbers, that is to say, of $1+2+3+4$ 111). To make the number 10, the >>decade<<, complete, one needs not only the >>geometrical<< numbers 1, 2, 3, but also 4. How important this number is becomes apparent from the structure of the decade :

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In this construction the number 10 is indicated not only as a set of the numbers $1+2+3+4$, but also as the essential or primary triangle, the three sides of which always show a four-number or >>tetraktys<<. If the number 3 is the soul of the universe, then the number 4 is, so to say, the model of it, the form in which the scattered points, lines and triangles get their fully developed shape. That the Pythagoreans, with regard to the tetraktys, also used to speak of the >>roots<< of the cosmos becomes more significant, if we keep in mind the doctrine of the four elements (>>roots<< just as well), fire, earth, air and water, for the whole cosmos is a compound of these elements. The Pythagoreans used to swear by the sacred number 4 112), and something of this holiness is still living on in our linguistic usage. For do we not speak of >>a square deal<<, and do we not face somebody >>squarely<<?

11. The problem of the One and the Many

It is not necessary to elucidate the theory of numbers, this curious mixture of rationality and mysticism, in all its details. But there is one aspect of it that is of a special significance for our subject. For this numerical symbolism is an attempt to solve the problem of the One and the Many, a problem that, with that of >>Matter<<, the primary material of all existing things, belongs to the most ancient fundamental questions of all philosophy. Every one of us is acquainted with this problem, even if we have no philosophical education. Everywhere around us we see a multiplicity of things, of objects, plants, animals, men, and this multiplicity is so great that we are in danger to become quite confused by it.

Therefore we reduce this multiplicity to smaller multitudes, and finally we even range it under unities. This we do, when we are speaking of >>the animal<<, >>the Englishman<<, >>the creation<<, >>the universe<<. Or are we doing just the reverse : do we carry in ourselves an image of the One, for example of >>the human being<<, so that we are able to recognize faultlessly all human beings as such? Do we know that something is red, because we possess in ourselves an idea of >>redness<<? Do we operate inductively or deductively therefore? Do we go from the One to the Many or from the Many to the One? And if one of the two is primary, does that mean that a higher reality is inherent in it? Is the One more >>real<< than the Many? Or is the reverse true? And if the One is primary and thus more real, is it the only reality then, and is the Many only appearance? Is on the contrary the Plurality the real thing and the One no more than a mental fantasy, a concept, an idea, in short, an intellectual makeshift, but not >>real<<? Very ancient questions all of them that already have intensely absorbed the Pre-socratic philosophers 113), questions that indicate not only a certain polarity (between the One and the Many), but even a clear-cut opposition, a dilemma that in its turn may lead to a relative or an absolute dualism, where one has perforce to elect for the one or the other, but never for both. And if this happens - and it happens fairly often -, then it is usually the Many that is rejected contemptuously.

We have seen already that the Pythagoreans give the number 1 a very distinct place. We must realize that we do this too, because all numbers are generated by adding up from 1 upwards and with 1. Every number may be written as a series of unities ($5=1+1+1+1+1$). Perhaps we might conclude, then, that for the Pythagoreans 1 is the origin, the >>archê<<, of all things. More than one ancient or modern author has drawn this conclusion 114). But it is not as simple as that. For the early Pythagoreans the number 1 was a composite number too, that is to say, a compound of the Even and the Odd 115). We must again impress upon ourselves that 1 is not just a common number, but a kind of >>primary number<< from which all

others spring, and therefore it must necessarily contain the principle of the Even as well as that of the Odd. If we consult the famous list of the ten (sic) Pythagorean principles, with their corresponding opposites (as mentioned by Aristotle 116)), one observes that the pair >>one-plurality<< comes only in the third place; it is preceded by >>even-odd<< (in the second place) and by >>limit-unlimited<< (in the first place). This last pair is actually the origin of all things, and all numbers, the 1 as well as the others, originate from this pair 117). Probably we have found here the basic principles, the >>archai<< proper, of Pythagoras and his school 118). If this view is the right one - it depends somewhat on the interpretation of the sources -, then the conclusion is inescapable that in the final analysis the Pythagorean philosophy and ideology were dualistic - >>frankly dualistic<<, says Gutrie 119) - in spite of their views on cosmic harmony and so on.

12. The dualistic basic principles

Let us take a close look at these two basic principles, the Unlimited, in Greek >>ápeiron<<, and the Limit, >>peras<< 120). As heirs of the Romantic tradition we are inclined to attach the greatest value to the unlimited or boundless, but this was not the habit of the Greeks. The apeiron - we must not think of this as a concept, but rather as something substantial - frightened them; it was holy and mysterious, but at the same time terrifying, it was like the undomitable and interminable sea, the drifting sand, the impenetrable wilderness. Just as they strove to delimit their cities and their fields they needed definitions in their thinking, >>frontiers<<, hence their predilection for >>peras<<. But at the same time the Pythagoreans were aware of the fact that peras restricts and confines, that it impairs the divine.

The basic number 1, the One, comes into being like this. In the pair of opposites >>limit-unlimited<< the unlimited is still somewhat older or more primary than limit. Now peras lays itself on the Unlimited and delimits a part of it, a part that is clearly

confined and circumscribed. More concretely one could see this as the coming into being of the cosmos out of the surrounding void. This imposing of >>frontier<< on >>void<< is equivalent to the imposing of order, law, regularity, time, or to express it in the sense of the Pythagoreans : of number. This is why the number 1 is even as well as odd, and therefore one will find this element in all other numbers and also in all things, because they have originated without exception from the 1. In this concept the cosmos is not only very different from the surrounding void, it is also contrasted with it so strongly that we may safely speak of a dualistic opposition. We can detect here a certain >>horror vacui<<, a fear of the void, of chaos. And with all our admiration for Greek logic and rational science we must keep this in mind, because this fear was also a basic component of the Greek mentality.

13. The role of music

We might say with Heidegger that the Pythagorean way of life is a declaration of war on lawlessness 121). The love of order and harmony that is proper to it gets its rational expression in the theory of numbers : through cognizance of this theory, by developing feeling and taste for it, the Pythagorean got into touch with the essence of things, with the foundations and the model of the cosmos. Man himself is part of this cosmos, he belongs to it, he is a microcosmos in the macrocosmos. His organic structure is the same as that of the great cosmos, and, reversely, this great cosmos resembles man in such a way in its structure that the makrokosmos might be called >>makranthropos<< (= the big man) just as well 122).

One of the most fruitful means which Pythagoras applied to subdue the polarities, the dualisms of our existence and to bring about general harmony was music. It is certain that Pythagoras discovered the mathematical foundations of music 123). What led him to this discovery need not concern us here. Needless to say, it has inspired the usual quotient of legend. The crucial fact is that, according to Pythagoras, the tones of a lyre with four strings form an arithmetical

succession of numerical proportions 124). As the Pythagorean theory of music was based on the theory of numbers, it links up nicely with the preceding paragraph and is at the same time a proper introduction to the Pythagorean philosophy of life.

The notion that certain rhythms and melodies have a healing effect is typical for the Pythagorean movement. Earthly music, audible for a mortal, is an imitation of cosmic music. Listening to such sounds purifies the soul of earthly stains and enables her to ascend to higher spheres. It prepares the >>theoria<<, the condition in which we are able to contemplate the heavens, and this in its turn is a preparation for and the foreshadowing of the ultimate destination of the soul, her return to the reign of the stars. Pythagoras would have been horrified by the idea of >>light music<<, of music simply for amusement. Neither did he think that every kind of music is fit for performing. If he had been equipped with a modern ear for sound, would he not have been just as alarmed in hearing Beethoven's fifth symphony as Goethe was? At any rate he did reject the flute, which can produce shrill tones as well as sweet ones, and stuck to the lyre, a stringed instrument which he played very well himself. It is said that with his tones he healed physical and mental illnesses and subdued human passions 125). For by means of music the harmony of the cosmos is transferred to man, the micro-cosmos.

14. The Pythagorean philosophy of life

Pythagoras' science and philosophy were the foundation of a philosophy of life whose practical aim was the education of people for a special >>way of life<<; this way of life was of the utmost importance, because eternal salvation had to be its final result 126). This is an important gnostic and dualistic element. The knowledge one needed to know how to live is knowledge (>>gnosis<<) of hidden things; as a means to earn eternal salvation it is an essential factor in this way of life. We have already seen that the Pythagorean fraternity was the bearer of a way of life taught by

Pythagoras, and in >>lawless<< Croton this formed the >>peras<< which cut off the town from other >>lawless<< cities and transformed it into a cosmic harmony in miniature, as we have already seen 127).

This is why the four speeches with which Pythagoras opened his >>mission<< in Croton, are of such a considerable importance. They have been handed down to us by Iamblichus 128). The question, of course, arises whether these speeches have any historical basis. In her analysis De Vogel does not find sufficient justification to ascribe them to an other hand - Gorgias, for instance 129). While the speeches may not be literal transcriptions, there is little doubt that they do reflect faithfully his general train of thought.

These four speeches were addressed respectively to the young men, the senators of the town, the women and the children. The thread running through all of them is the idea of >>homonoia<<, of unanimity, to which all moral reforms must lead 130). There is something ingratiating about these speeches; they certainly aim at a world totally different from that of Homer's pugnacious knights. We may, indeed, agree with professor De Vogel's assertion that in antiquity Pythagoras was the first to preach the love of one's fellow men and to practise it 131). "Lead an exemplary private life, leave the wife of another alone, do not become abusive, show self-restraint, be friendly in social intercourse, try to educate yourself and to learn". Moreover, in the speeches in which he talks so much about love (>>philia<<), he is said to have been the first to use the term >>philosophos<<, lover of wisdom 132).

This >>philosophy<<, this knowledge of wisdom, of a very special wisdom, is of the utmost importance, because the Pythagorean way of life assimilates its votaries with the godhead, not by asceticism, as in Orphic mysticism, and not by initiation, as in the mysteries of Eleusis, but by cognizance of true wisdom, of >>philosophia<< 133). This aspiring after mystical unification with the godhead, this longing to be one with the All-One, is also characteristic of dualism, because it heals a breach in our existence. It transports one from one world to another and a better one. This concept of the

All-One, of kinship with all that is living, is fundamental in this movement. The cosmos is a living being, it breathes like a human being, but it is eternal. Man, the microcosmos, is part of this eternal cosmos, and therefore, according to Pythagoras, his soul is immortal, although his body is mortal. Respect for all life expresses itself also in the love of children, who, he says, are dear to the gods. There is equal respect for animals, as, indeed, in other esoteric movements. Vegetarianism is the norm, although, curiously enough, there is a ban on the eating of beans.

This so-called >>bean-taboo<< has been the subject of a great number of explanations, all different, and not a few of them rather odd (134). Of these I shall mention one that has some degree of probability : beans were banned, because their form brought to mind the foetus in the maternal womb. On the other hand, there is the fairly obvious consideration that bean eating causes flatulence (135). Probably this propensity to flatulence was a painful reminder of the irregularity of the body which the Pythagoreans did not esteem highly; anyhow it was an expression of >>lawlessness<<, of an evident disharmony between body and soul, between man and society, and an outrage on the >>philia<< and >>homonoia<<. In many esoteric movements notions of health, indeed of absolute health of body and mind, are extremely important. Pythagoras' views of illness and health rest on his idea of harmony (136). We detect this striving after health in the will to lead a regular life, in hygienic prescriptions, in the abhorrence of excessive drinking, in vegetarianism, in the predilection for physical exercise, in the exposure to rhythmic and melodious music, and perhaps too in the idea of keeping aloof from the masses, in which fear of contagion may play a role.

In movements like these we may meet more often than not peculiar ideas on sexuality. Sometimes unbridled sex is seen as necessary for absolute health, but most of the time there is a puritan abhorrence of the erotic. In this respect Pythagoras was remarkably moderate. Married himself and a father of children he impressed conjugal fidelity on the men, and instructed the women that sexual intercourse did not make them unclean so long as they

slept with their own husbands. It is true, however, that the sexual ethics of the Pythagoreans were far more rigorous than the normal Greek practice : they rejected abortion as well as euthanasia and were opponents of surgery. Extramarital relations were considered as reprehensible (137).

The attitude of the Pythagoreans to women is somewhat ambivalent. Man and woman are equals, so they taught, and Pythagoras had even taken the trouble to address the women separately. On that occasion he had not omitted to impress upon them that, equals or not, their husbands still ranked above them. But did the Pythagoreans know that venomous aversion to women which we meet so often in the ancient world, and which is typical of esoteric movements? While this does not become apparent, we do find the polarity >>male-female<< in that list of the ten opposites I have quoted already. The >>female<< is to be found in the fifth place of the unfavourable series together with >>unlimited<< and even with >>back<< (in the eighth place).

The >>bean-taboo<< is one of the so-called >>akousmata<< or maxims (138). They formed a motley collection of rules that, according to the judgment of many scholars, belong to the most ancient sphere of the Pythagorean movement. By their sometimes >>magical<< character some of them evidently have connections with still older tendencies in the Greek world. Several of them are incomprehensible to us : "Do not urinate on your own cut off nails", to cite an example. They contain ethical rules too, as well as the first impulses toward the theory of numbers : "The wisest of all is number". Later generations found these maxims hard to stomach and preferred to speak of >>symbola<< which implies a certain shift in emphasis : what was at stake was not so much living up to these maxims, but exploring, rather, their deeper significance (139).

The attraction of the Pythagoreans for the older layers of the Greek literary tradition is evinced also by their predilection for poets of the eighth century, Homer and Hesiod. In the Pythagorean fraternity these were read regularly, not, perhaps, in their entirety; rather certain carefully chosen pericopes were sung and in

any case accompanied by the lyre. Possibly the recited verses were provided with a commentary. An especially well-liked part seems to have been the death of Euphorbus, in the >>Iliad<< 140), because Pythagoras saw in this man an earlier incarnation of himself 141). Here Deleigne suggests the interesting idea that the aim of the sessions may have been to run counter to the course of history and place oneself outside of time 142). This is interesting because adherents of dualism regularly show the tendency to divest themselves from the vicissitude and changeableness of all earthly things as they become apparent in time and history.

Pythagoras is said to have been not the first, but the third reincarnation of Euphorbus, who in his turn was a reincarnation of Aethalides, a son of the god Hermes. A late source tells us that between two incarnations a period of 216 years elapsed 143). Now >>216<< is a mystical number, because it is the third power of 6, and 6 too has a mystical significance, since it represents the >>ewige Wiederkehr<< : every power of six also ends in the number 6.

This brings us to one of the most fundamental ideas of the Pythagorean doctrine : the idea that is normally, but not entirely correctly called >>migration of the souls<< (metempsychosis), but should more properly referred to as >>rebirth<< (palinogenesis). This is the nearest Pythagoreanism comes to anything we could call a theology. In other respects, its theology is far from precise. Pythagoreanism uses terms such as god, the gods, and the godhead interchangeably. As Diès tells us, it is highly questionable whether >>the divine<< is represented as an unequivocal principle, and if this is the case, it is far from clear where this principle is located. But one thing is certain : the human soul comes from this principle and returns to it again 144).

We shall not yet take up here the difficult problem where Pythagoras picked up his doctrine of rebirth 145); we shall restrict ourselves to the fact that it was well established prior to the time of Pythagoras. For its diffusion, however, the Pythagorean movement has been of the utmost importance. The Pythagorean doctrine which deviates strongly from the usual Greek view that after his death the

deceased leads a shadowy existence in Hades must have been attractive in more than one respect. It affirms the hope that everything does not end in death; that the best in man, his >>soul<<, survives; and, finally, that the soul ascends to the divine and becomes unified with it. Thus the soul can exist in itself, apart from the body, because it is immortal in itself. The doctrine, however, not only speaks about a return to the divine, but also of an origin in the divine, for the soul is a spark or a part of the universal soul, the world-soul. This implies that the human soul must have had a pre-existence, long before she became united with a body. All three elements, the survival of the soul, her divine origin and her return to the world of the eternal, are characteristic of gnostic-dualistic movements.

The consequences of this view are just as characteristic. It is obvious that in this way we get a polarity >>soul-body<<, even a dualism, for the soul is locked up in the earthly, material, transient imperfect body as in a prison and tries to liberate herself from it. The idea that the body, with its passions and needs, is of a lesser quality, is not biblical, but was shaped for the first time in the Hellenic world, in the Pythagorean movement, and was taken up later by Plato. The fact that the soul is joined with some body or another only goes to prove that she has not yet recovered her original purity. And as long as this is the case she must roam from body to body, human, animal, vegetable, until she is qualified for her final return. This idea too, of the cycle of transmigrations, of the >>wheel of rebirth<<, is common to all these movements.

They differ, however, with respect to the way in which a soul may release herself from this cycle. For the Pythagoreans the soul regains her divine purity by knowledge, knowledge of things divine, of the theory of numbers, of cosmical mysticism, a secret knowledge which is only for the happy few. The knowledge, this theōria of things eternal, had to be supported by a particular way of life, by calm, study, music, seclusion, asceticism. The key-words were : frontier (peras), order, number, temperance, cosmos, harmony; their beloved god was Apollo. And the others who know nothing of these things, who

only live on? They live on indeed, as a dog, as a cow, as a cook, may be even as a prince, but they are utterly incapable of jumping off the wheel of rebirths.

15. Was Pythagoreanism dualistic?

There is one question left which is the decisive one in this context : can we call Pythagoreanism dualistic or isn't this permissible? There are, doubtless, some elements which run counter to the idea of a dualistic Pythagoreanism. The notions, for instance, of cosmos, of harmony, of the All-One, all of them factors that may indicate a basic monism. Yet in addition to these monistic elements there is also a strong dualistic tendency in Pythagoreanism. On the one hand, there is the monistic axiom : all life is one; on the other hand, the dualistic axiom : in the world, in the soul, a real conflict exists between opposing forces, good and evil, darkness and light (46). Even Cornford who has defended for a time the thesis of a fundamental Pythagorean monism, admitted that the system of Pythagoras is dualistic because of the unbridgeable soul-body opposition (47).

As we have seen earlier in the list of Aristotle, we should not consider the One as absolutely primary; the pair One-Many is preceded by the pairs Limited-Unlimited and Even-Odd, and it is from these the Monad springs. The Pythagoreans venerated the One as a god or as something divine, but this does not exclude the supposition that they believed in two opposite principles. We find this confirmed by later commentators, the so-called >>doxographers<<; to cite only one of them : "About the principles Pythagoras said that the Monad is a god and the good, the real nature of the One, the Spirit itself, but the unlimited Dyad is a daimon and bad; it occupies itself with material multiplicity" (48). In my opinion we cannot escape the conclusion that Pythagoreanism was a genuine, albeit mitigated, dualistic system (49).

I have skipped expressly the question whether Pythagoras' dualism was completely original, or whether it had any forefathers and relations in or outside the Hellenic world. I shall return to

this question later. But it is certain that in the Pythagorean fraternity dualism for the first time got a firm hold on an ideology and used this movement as a vehicle to propagate itself. The most important thinker, a man with an incalculably great influence in whose works we shall discover it fully, was Plato. To end this chapter, I shall try to connect Pythagoras with Plato across the time gap which divided them.

16. Pythagoreanism between Pythagoras and Plato

The rebellion in 509 B.C. against the Pythagorean fraternity in Croton meant the end of Pythagoras' sojourn in this city, but not the downfall of his society. For the period between 500 and 400 several leaders of the fraternity in Croton are mentioned, among them Mnesarchus, Pythagoras' son. The influence of the league may, indeed, have increased, but at the same time there was a sizeable opposition. In 454 B.C. there was yet another revolt against it fomented by a party that is somewhat euphemistically referred to as >>democratic<<. During the clashes the house of Milo, in that time probably the headquarters of the fraternity, was set on fire, and most of the leaders perished in the flames. In the following years other rebellions ended the influence of the Pythagoreans : everywhere the >>democrats<< took over.

But the fraternity was not yet lost! Archippus and Lysis escaped from the burning headquarters. Archippus went to Tarente. This city, originally Taras, said to have been the one and only Spartan colony, had an aristocratic ruler; it had never been a part of the Crotonian league of cities. Archippus, a Tarentian himself, founded a fraternity here; it remained in existence till 300 B.C. Lysis, on the other hand, left Italy and arrived in Thebes, in Greece, where he became the teacher of the famous general and statesman Epaminondas. The Theban fraternity was therefore held in a certain esteem. Among its members it counted one of the most famous emigrants from South-Italy, the already mentioned Philolaus. Simmias and Cebes are on record as his pupils; we know them from Plato's >>Phaedo<<, and here we have a

connection between him and the fraternity 150). Another Pythagorean colony is mentioned in Megara, on the Isthmus of Corinth, and yet another at Phlius, on the Peloponnese. At Phlius Pythagoreans were still active in the fourth century, but it is said they were the very last ones. The group there had connections with Socrates, the second link with Plato.

After the collapse of the Pythagorean influence in Southern-Italy not all the leaders seem to have left Italy. At Rhegion (Reggio di Calabria) a new centre came into being after 440 B.C., which seems to have existed for a long time. It even happened that once again a Pythagorean became influential and respected, Archytas, at once a mathematician and a philosopher, and a statesman in Tarente. Even as a general he was successful 151). In a way he surpassed Pythagoras, for he was not overthrown. Perhaps the reason was that, as Strabo writes, Tarente had democratic institutions under his rule 152). Plato who was about the same age as Archytas and who visited Southern-Italy three times, in 388/387, in 368 and in 362, was a personal friend and paid him several visits in his town. It is said that Archytas freed Plato in 362 out of the hands of his enemy, Dionysius II of Syracuse 153). It is certain that Pythagoreans such as Archytas exercised a strong influence on Plato; this constitutes the third, the most important and the most direct link between Pythagoreanism and Platonism. But the detailed description of this relationship falls outside the scope of this volume 154).

NOTES TO CHAPTER I

- 1) It is another question whether he has in fact written nothing at all. Diogenes Laertius (DL VIII 6) says that some scholars in Antiquity were of the opinion that he had written several works; he himself mentions six texts by Pythagoras. One will find a short survey in Van der Waerden, *Die Pythagoräer*, 286-293. An extensive list of so-called >>Pythagoreans<< books in *PW Suppl.* X 843-863. See also Thesleff, *Pyth. Texts*. The greater part of the texts relating to Pythagoras, Pythagoreanism and the Pythagorean fraternity is to be found in *DK I*; in this work, however, the texts are not systematically arranged. One will find a systematical

arrangement according to themes in the three volumes of Cardini, *Pitagorici* (Greek texts with Italian translation). Important texts also in Kirk/Raven. The classical commentaries have been assembled by Diels, *Doxographi Graeci*, cited in this book as *Dox.*

- 2) Guthrie, *Hist.* I 146.
- 3) Burnet, *Early Gr. Phil.* 84 and 92.
- 4) Erwin Rohde, *Die Quellen des Iamblichus*. *Rheinisches Museum*, 1871, 544 sqq, cited by De Vogel, *Pyth.* 53.
- 5) Burkert, *Welsh. und Wiss.* 201 speaks of a >>quasi-historical person<<. The conclusions reached by Burkert are summed up briefly by De Vogel in her review of Burkert's book in her own book *Philosophia* I 78/79.
- 6) Röd, *Phil. d. Ant.* I 52 says that later authors showed the tendency to ascribe every result to Pyth. himself, and that the secrecy maintained in the Pyth. fraternities makes it impossible to ascertain whether central scientific insights go back on Pyth. or are the work of later scholars.
- 7) In his >>Vita philosophorum<<.
- 8) In his >>Philosophi Platonici Opuscula Selecta<<.
- 9) >>De Vita Pythagorica Liber<<.
- 10) The dates of DL are not certain, maybe 1st cent.
- 11) De Vogel, *Pyth.* 9. Gorman, *Pyth.* has set too great a store by the three quoted >>viteae<< and has therefore written a much more >>complete<< biography than is historically justified.
- 12) Gorman 2.
- 13) De Vogel, *Pyth.* 5. This Timeaus is not the same as the namegiver of one of Plato's late dialogues.
- 14) Von Fritz, *Pyth. Pol.* 16.
- 15) Von Fritz, *Pyth. Pol.* 31.
- 16) DL III 46; Von Fritz 27.
- 17) De Vogel, *Pyth.* 9. Against the historical existence of Pyth. the objection has been raised that Ar. does not mention his name, but because Plato does not do so either, this argument means nothing.
- 18) Rep. 529d, 530d, 600a-b, Gorg. 507a, 508a.
- 19) Raven, *Pyth.* and El. 97-100.
- 20) De Vogel, *Pyth.* 8.
- 21) Her. IV 95.
- 22) Ion of Chios, *DK. fr. 2*; Heraclitus, *DK fr. 40* and 129; Empedocles, *DK fr. 129*.
- 23) De Vogel, *Pyth.* 3.
- 24) The word >>tyrant<< had then not yet got its later unfavourable meaning.
- 25) See for this passage Nestle, *Mythos zu Logos*, Ch. II.
- 26) See the chronologies of Von Fritz, *Pyth. Pol.* 49 and De Vogel, *Pyth.* 21.
- 27) De Vogel, *Pyth.* 21-23.
- 28) De Vogel, *Pyth.* 24; Gorman 14 and 182.
- 29) Gorman 23.
- 30) Gorman 18.
- 31) *Iambl.* 9; Gorman 19.

- 32) Porph. 1; Gorman 23.
- 33) Philip 175.
- 34) Porph. 2 and 10.
- 35) According to Aristoxenus cited by Hippolytus, Elenchos 12.12-7.
- 36) Porph. 12 says that in Babylon Pyth. came into contact with >>Zaratos<< (=Zarathustra) and heard his doctrine >>about nature and the origin of all things<<; see also Gorman 63-65.
- 37) Iambl. 20.
- 38) Iambl. 28.
- 39) De Vogel, Pyth. 55-60.
- 40) De Vogel, Pyth. 60.
- 41) Minar, Early Pyth. Pol. 15.
- 42) Gorman 130.
- 43) De Vogel, Pyth. 52-57.
- 44) Minar 100; Von Fritz 96.
- 45) De Vogel, Pyth. 2.
- 46) Philip 24 and 34.
- 47) Philip 146.
- 48) De Vogel, Phil. I 105 points out that Philip begins to write in an extremely sceptical way, but ends with accepting a classical Platonic Pythagoreanism.
- 49) Minar 18.
- 50) For instance, Rostagni cited by De Vogel, Pyth. 13/14, and Delatte cited by De Vogel o.c. 10/11, see also Minar 15. Burnet has stated categorically: "The Pythagorean order was ... not ... a political league", Early Gr. Phil. 89, and with Rohde he assumes that the idea of the order as a political league goes back on Dicaearchus who wanted to see in the order above all something practical.
- 51) Von Fritz 95/96.
- 52) Ar., Met. 985b 24-25.
- 53) Minar 17-22.
- 54) Minar 12/13.
- 55) In support of these passages I have used Gorman's chapter >>The Society<<.
- 56) DL VIII 10; Iambl. 71/72.
- 57) Iambl. 246. The injunction to remain silent about the secrets was observed rather well, but nevertheless there were >>leaks<<. Van der Waerden 117 thinks that in his lost book >>Katharsis<< Empedocles has communicated part of the secret doctrine, because he found that it had to be accessible to all.
- 58) Iambl. 81.
- 59) Iambl. 81.
- 60) Iambl. 72 who may have found this report in Timaeus, via Apollonius of Tyana, see Van der Waerden 173.
- 61) Iambl. 98.
- 62) Iambl. 96-100, see also DL III 22.
- 63) There existed also a taboo on the use of wool.
- 64) Boyancé thinks that Iambl. found this description in Aristoxenus and that this author has described the way of life of the order about 370 B.C. rather than that of the 6th cent. But this

- does not tell us much. Regulations of spiritual orders are tenacious. The Carthusians still live up to their original rules and have never been in need of a reformation. And other orders of the Roman-Catholic Church have always reformed themselves in conformity with the original rule, if they had deviated from it. Pythagoreanism too was conservative. Therefore I do not think that the situation of 370 was much different from that of 520. Perhaps there was originally only a partition into two; into >>outsiders<< (>>exoteroi<<) and >>insiders<< (>>esoteroi<<), Hippolytus, Elenchos 1 2.4 and Iambl. 72; later, however, the members proper fell apart into two groups, the mathematici and the acousmatici, see Burkert 187-202; he shows that the source for this falling apart has probably been Aristotle. For a good review of this problem see Van der Waerden 30-45.
- 66) De Vogel 48; at the back of her book pictures of these flags.
 - 67) Words that, according to legend, Constantine the Great heard, when he saw the vision of a cross just before the battle at the Milvian Bridge on October 28, 312: "In hoc signo vinces!"
 - 68) Goettling 286 is referring there to C.A. Lobeck, Aglaophamus. Darmstadt, 1961. Nachdruck der ersten Ausgabe, Königsherg, 1829.
 - 69) Cited by De Vogel 47.
 - 70) De Vogel 45/46.
 - 71) Lucianus, Pro lapsu inter salutandum 5. See De Vogel 45/46 and Van der Waerden 179/180. Goettling too points to the word >>hygieia<< as the significance of the pentagram.
 - 72) Stapleton 35.
 - 73) De Vogel 47 and Appendix A.
 - 74) Stapleton 12; the ewer comes from Jemdat-Nasr, in Lower-Iraq, it is now in the Ashmolean Museum, Oxford.
 - 75) Stapleton passim.
 - 76) Burkert 109 and 141.
 - 77) Burnet 97.
 - 78) Philip 3.
 - 79) Philip 159; according to this author there is no reason to see a shaman in Pyth.
 - 80) Miracle-stories arranged by Burkert 118-120; good survey in Van der Waerden 51-63.
 - 81) Porph. 27; Iambl. 134; Aelianus, Varia historiae 2.26 and 4.17.
 - 82) Burkert 123; for this author who wants to see in Pyth. only a shaman and nothing else, this shamanism is an indispensable part of that tradition.
 - 83) Iambl. 7; these rumours have presumably Apollonius of Tyana as their source and were perhaps circulated because Jesus of Nazareth was considered the Son of God. Iambl. himself did not attach much value to this report; see also Gorman 19/20.
 - 84) According to Burkert the idea that somebody could have a body of metal is typical for shamanism.
 - 85) Porph. 28; Iambl. 135 and 140; DL VIII 11; Ael., Var. hist. 2.26 and 4.17, emanating from Apollonius. See Van der Waerden 58/59 and Gorman 40, who calls Pyth. a >>freak<< here.
 - 86) De Vogel 1.
 - 87) In his >>Vom Ursprung und Ziel der Geschichte<<, 1949, 19sqg.

- 88) Nestle calls this >>die Gebrochenheit der Vollkultur<<.
 89) Nestle 1-6.
 90) Deienne 18/19.
 91) Guthrie I 193 thinks that this split did not become a fact earlier than 450 B.C. See also Cornford, *Mysticism*, in *Class. Quart.* XVI 137-150, and Nestle, *Entwicklung*, and *Intellektualismus*.
 92) Van der Waerden modifies this in so far that he sees in Pyth. an able mathematician who picked up his knowledge in Babylonian, but not an original mathematical thinker. If this is right, then the >>theorem of Pythagoras<< did not originate with him.
 93) Guthrie I 181.
 94) Rougier, *Rel. astrale* 22.
 95) Van der Waerden 256.
 96) For some elements in this passage see Guthrie I 106.
 97) Guthrie I 470/471 and II 211-263.
 98) Van der Waerden 256.
 99) One can read this extensively in Aristotle, *De Caelo* 293. This philosopher ascribes the opinions about the central fire and the >>counter-earth<< to the so-called Pythagoreans<<. Van der Waerden, however, thinks that the older Pyth. had the earth in the centre and that the system as I have drawn it is of a much later date, being designed by, perhaps, Philolaus of whom vdw does not have a high opinion. I do not think that the proofs of vdw are strong. The texts that ascribe the system to Ph. are of a very late date, others do not mention Ph., but Niketas. VW thinks that Plato who put the earth in the centre, had this from Pyth., but what proof is there for this? And then he finds that Arist. speaks somewhat denigratingly about his >>so-called<< Pyth. and that therefore there must have existed older Pythagoreans who earned more respect. But Ar. nowhere shows deep respect or veneration for any Pyth. Anyhow, anachronisms are unavoidable here. Guthrie I 289 is ready to ascribe the whole system to Philolaus, but says then that there are elements of Pyth. himself in it. There is, for that matter, also a Pyth. tradition according to which the earth stood in the centre, and this agreed better with popular belief, Guthrie I 293. Philip says first that the astronomical-mathematical theory cannot be of Pyth. himself, but, he then adds, as >>a poetical notion<< it is possible! We remain guessing, he sighs somewhat dejectedly, Philip 128.
 100) This picture remained intact till Galilei discovered the solar spots, Rougier, *Rel. astrale* 52.
 101) Rougier, *Rel. astr.* 44-52. Texts in Rougier, *Origine*.
 102) Taylor, *Commentary* 107.
 103) Since the celestial bodies are perfect, they describe a circle, a >>sphairos<<, the distinctive mark of the perfect, DL VII 35. This is why we speak of the >>harmony of the spheres<<, although it is not the spheres that produce the sound.
 104) Ar., *De Caelo* 290b; Ar. deals with this theory with an unmistakable disdain.

- 105) Porph. 30; Iambl. 65.
 106) De Vogel 67.
 107) De Vogel 159.
 108) Burkert 36.
 109) Philip 76.
 110) Ar., *Met.* 986a.
 111) Burnet 103.
 112) Gorman 143/144.
 113) See Stokes' book 'One and Many'.
 114) Among others Cornford, *Mysticism* 3, n. 1.
 115) Ar., *Met.* 986a.
 116) Ib.
 117) Ib.
 118) Guthrie I 246.
 119) Guthrie I 249.
 120) Heidel 384-399.
 121) Heidel 386.
 122) Meyer 5-7.
 123) Gorman 160.
 124) Iambl. 66, 67.
 125) Iambl. 64; Porph. 33. Compare this with the role that Corelli's harpsichord sonatas play in Hermann Hesse's >>Das Glasperlenspiel<< (1943).
 126) Guthrie I 182.
 127) De Vogel 67.
 128) Iambl. 37-57.
 129) De Vogel 140.
 130) Gorman 96.
 131) De Vogel 159 sees in the fact that this doctrine is different from that of Plato in *Nomoi* and *Politeia* a proof that it is authentic.
 132) The origin of this word is an old point of controversy. See Burkert, *Platon oder Pythagoras* 159-177.
 133) Guthrie I 199.
 134) Delatte, *Faba* 34-70.
 135) "Every bean has its tone", in Dutch vulgar speech.
 136) Iambl. 106; De Vogel 292.
 137) De Vogel 235-239.
 138) List in DK 45c; sources in Burkert, *W.u.W.* 155-157.
 139) Burkert, *W.U.W.* 150 sqq.
 140) IL XVII 51-60.
 141) Porph. 26; Iambl. 63; DL VIII 4-5.
 142) Deienne 31.
 143) *Theologoumena Arithmeticae*, cit. Gorman 29.
 144) *Diès*, *Cycle* 50-61.
 145) *Fimmen* 513-523.
 146) Cornford, *Mysticism* 140/141.
 147) Cornford, *Principium* 111; it therefore seems to me that Guthrie I 248 does not do full justice to Cornford.
 148) *Aet.* 1.7.18 = *Dox.* 302, cit. by Guthrie I 248.
 149) Raven 19 also draws the conclusion that in early Pythagoreanism not the *Monad* - a term unknown to Arist. -, but the antagonistic

- pair >>peras-apeiron< has been primary.
 150) For Philolaus see Guthrie I 329-333.
 151) DL VIII 79.
 152) Strabo, Geographia VI 280 = DK 47 A 44.
 153) Guthrie I 333-336
 154) Our principal source for the period after 500 B.C. is Iambl.
 250 sq. See also Von Fritz Ch. IV; Gorman Ch. X; Van der
 Waerden Ch. IX; Guthrie I IVE.

CHAPT ERI IONICA AND ELEATICA

1. Pherecydes, a link with Pythagoras?

Guthrie calls Pherecydes of Syros 'one of the most interesting figures on the borderline between myth and philosophy', but he allows, nevertheless, this interesting figure not more than one line in a footnote 1). He is also alluded to in other general works, but, just as in Guthrie, he is rarely the subject of extended comment. He is, however, interesting precisely because he stands in that 'development away from mythopoeic towards rational thought' 2), and from our point of view he is particularly interesting since he may be thought of as a link between Pythagoras and the Ionians. Hence a short consideration may be useful.

Pherecydes, hailing from the island of Syros, in the centre of the Cyclades, lived without any doubt in the sixth century B.C., but with regard to his precise chronology much difference of opinion exists. We may, however, take for granted that he experienced his >>floruit<<, the pinnacle of his activity, in the middle of that century 3). He seems to have visited many cities in the Hellenic world, and there is also talk of a stay in Egypt 4). The classical authors call Pherecydes the teacher of Pythagoras, and they do this unanimously 5). During the dramatic events in Croton in 509 B.C. that I have already referred to, Pythagoras, according to one tradition, happened to be on Delos. There, although others say it was on Samos, the old Pherecydes was dying of the >>lice illness<< - whatever this ailment may have been, it does not give us a high opinion of the personal hygiene of this philosopher! Pythagoras is reported to have laid his old teacher to his last rest 6).