Introduction to Philosophy

by

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Chapter One: *Introduction to Philosophy*
Philosophy and the History of Ideas

What is Philosophy?

Among its fundamental beliefs, the science of Archaeology holds the belief that the history of modern human beings stretches back some one hundred and fifty thousand years. And although this enormous length of time might make it seem that this belief could not possibly be very reliable, nevertheless thousands of pieces of evidence exist to support this belief. In fact, archaeological evidence suggests that the origins of even *older* species of humans, such as the species that scientists call *Homo Ergaster* and *Homo Erectus*, stretch much farther back in time—in the former case, reaching back some two million years before the present.[1] Now *that* is a long time, and compared to that, one hundred and fifty thousand years is but the blink of an eye. All the same, before we can accept even this relatively recent date for the origin of *modern* human beings we must be willing to admit that Archaeology is a reliable science.

Unfortunately, admitting that Archaeology tells a reliable story is not an easy thing for many people to do, for the stories that this science tells us about the history of the world and of human beings tend to run counter to the stories our religions tell us about human origins. And since most of the people on the planet *do* subscribe to one religion or another, most humans have reason to reject the archaeological story of human beings—because the stories simply do not fit into their accepted view of human history. This is a serious dilemma, especially for those of us who embrace both Religion and Science. Nevertheless, the solution to this dilemma, I think, is already at hand, and is to be found in the concept of a what we call a *world-view*. A world-view is, simply put, just a way of *view*ing the *world*. For our purposes, however, viewing the world will mean not just seeing the world when it is already there, but viewing all that lies within our immediate surroundings in such a way as to conceive of it as a *World* (where the capital 'w' on 'World' is intentional and denotes a technical term). In fact, the actual existence of this World *as we conceive of it* is not something many philosophers take for granted these days; and when we realize that the other fairly intelligent animals on the Earth—the remaining Great Apes: chimpanzees, gorillas, orangutans, siamangs, and gibbons—who certainly seem to be able to see everything immediately surrounding them, *do not see a World* (or even "a world", as far as we can tell), then we might have to admit that these philosophers have a good point. For, in order to see a *World*, you must be able to conceive of what you see immediately around you as part of a larger whole, a whole that encompasses not only everything that you see right now, but even all

the things on Earth (and in the heavens) that you cannot see at this particular moment. Since we have no reason to believe that any of the Great Apes—or any other animals than humans, for that matter—are capable of such a concept as "the World", we may surmise that *the Great Apes do not see the World*, and that only humans have world-views.

Apparently, we humans have had one or another world-view for several thousands years, and this has led to the dilemma noted above. For in a very significant sense the institutions of both Religion and Philosophy provide world-views to the members of the societies in which these institutions exist. A world-view, again, is a "view" of a "World"; and it is fairly apparent these days that the World as viewed by Religion is drastically different from that viewed by Philosophy. That is, Religion and Philosophy deliver different world-views. Indeed, these world-views often seem to be at odds with each other (although they needn't be); with the World of Religion delivering an opposinhg view to that of the World of Philosophy. Nevertheless, Philosophy is, in a very real sense, nothing more than an intellectually mature way of doing what Religion has done for thousands of years—provide a World-View for its believers; and conversely archaic Religion is a type of naive Philosophy.[2] More specifically, Archaic Religion—the Religion of Archaic or Hunter-Gatherer cultures—because of its hoary origins, springs from a time when humans where little experienced with *the World*, that image that we first adopted when we were thus intellectually naïve. The world-view of Archaic Religion thus reveals the way we looked at the World when our species was still relatively young and thus naive at formulating world-views. All the same, Philosophy itself springs from this Archaic world-view; only, this newer way of *viewing* the World is a more sophisticated way (most likely only because it is a more recent way) of seeing the World; and its pronouncements upon the "World" often conflict with those of Religion. As a result, then, we are faced with a choice of world-views.

When we turn to the details of these world-views, we find that Archaic Religion provides a world-view that is based upon what is typically called, in anthropological terms, Sympathetic Magic. This form of Magic is an archaic social institution that (as we shall presently learn) allows humans to understand and manipulate the world. In contrast, the basis for the world-view that Philosophy provides is Science; but again, Science is not unlike Magic, just as Philosophy is not unlike Religions. For Science too is a social institution that allows us to understand and manipulate the world; only, Science is a modern institution that embraces the Philosophical world-view, whereas Magic is Archaic and embraces the Symbolic world-view. Nevertheless, Magic and Science are kindred forms of knowledge, with each providing what today we would call a *database of facts* about the physical world, and upon these databases archaic Religion and modern Science formulate their respective world-views. Accordingly, Religion and Philosophy are different ways of doing the same thing—trying to understand and manipulate the objects around us in terms of a world-view.

In order to appreciate the differences and similarities of Religion and Philosophy, then, we must first come to appreciate the differences and similarities of Magic and Science. And for this we must first note that Sympathetic Magic is typically divided into two branches: Homeopathic

or Imitative Magic, and Contagious Magic.[3] In the first branch, Imitative Magic, the basic overarching assumption about the world is that "similar things can affect each other". In Imitative Magic, then, we use one thing to affect a second, similar or analogous thing, and we can do this because, since the two things are somehow alike or analogous, and since "like influences like", *analogy* allows us to affect the second thing by affecting the first. A modern example of this is a voodoo doll, which is clearly just an image of (and thus analogous to) the person it represents. Using Imitative Magic, then, this likeness (the voodoo doll) is stabbed or burned or affected in some other way and, because of the *similarity* or *resemblance*—in a word, because of the *analogy*—of the doll with the intended victim, the magical injury to the doll is transferred to the human victim him- or herself. Thus, in Imitative Magic the symmetric relation of Analogy is the underlying fundamental concept.

In Contagious Magic, the second branch of Sympathetic Magic, it is not the concept of Analogy that holds sway, but Metonymy—a concept that includes such notions as "part and whole" and "cause and effect"; and in Contagious Magic, whatever is done to the part (like hair or fingernail clippings, even and particularly when the are not still attached) is also done to the whole. In this second magical relation, then, a *physical part* of the person whom the magician wishes to affect is used to accomplish the magical task. Accordingly, if you wish to perform a feat of Contagious Magic, you could for example use a lock of your intended victim's hair, or maybe his or her fingernails, to effect a magical injury; and if you want to eliminate someone by means of Contagious Magic, you simply destroy his or her hair (or something else that used to be a part of the intended victim's physical body), and the feat is accomplished. For when you destroy this *part* of the person, the original connection between the person and his or her hair or fingernails or whatever will allow you to destroy the person as well. And conversely, you could work the Imitative Magic in the other direction and, by grinding your own fingernail clippings into a powder and putting the powder into a potion, you could make a love potion. When anyone imbibes this potion, a part of your body (the powdered fingernails) enters into his or her body, and, through the Sympathetic Magic involved here, he or she effectively becomes a part of you and thus cannot resist your amorous advances.

These fundamental principles of Magic—both Analogy and Metonymy—are well known to anthropologists, who typically deal with cultural groups for whom Magic is still seen as a viable means of understanding and manipulating the world. Clyde Kluckhohn, for instance, who lived among and studied the Navaho, believed that these principles "are two 'laws of thought' almost as basic to Navaho thinking as the so-called Aristotelian 'laws of thought'" have been for Europeans "since the middle ages." We shall see something of these Aristotelian laws in Chapter Three. In the mean time, the point is that Kluckhohn recognizes the pervasiveness of the "law" that he calls "like produces like", and which according to Kluckhohn "has been important in the thinking of most human groups since the Old Stone Age or earlier".[4] In Kluckhohn's formulation the concepts of Analogy (the "like" part of his "*like* produces *like*") and Metonymy (the "produces" part) are combined into one magical principle. And Kluckhohn's example of the magical analogy between the far-seeing eagle and the star-gazing diviner nicely illustrates the

combination. "Since the eagle can see long distances," he says, "the diviner [a man or woman] who does star-gazing must rub a preparation which includes [remember, "includes" implies Metonymy] water from an eagle's eye under his own eyelids [thus establishing the analogy between the star-gazer's eye and the eagle's eye]." And we find much the same with respect to many Pueblo Indians, for instance; and again the anthropologist Elsie Clews Parsons *combines* these two ways of thinking—the Analogical and the Metonymical—when she tells us that the "use of *resemblance* as a principle of *cause and effect* . . . is a conspicuous habit of the Pueblos, controlling and fundamental in their ceremonial life."[5] Needless to say, the forms of "resemblance" and "cause and effect" referred to here are nothing but Analogy and Metonymy. These two overarching concepts, then—Analogy and Metonymy—were fundamental to the world-view of what we call Paleolithic or Old Stone Age peoples (such as the pre-Columbian American Indians we have just mentioned, and presumably even Stone Age "Europeans"). And it was archaic Religion, which emerged at this time, that provided this world-view. Accordingly, Archaic Religion was itself was fully enformed by the two Magical principles—Metonymy and Analogy—as was all human thought at the time,. In fact, all the gods and goddesses in all of the archaic Religions of the past were born not from self-generation or the like, as myth suggests, but directly from Analogy; and these deities are one and all *personifications* of some natural aspect of the archaic World, cast in anthropomorphic terms. The Storm God, for instance—be he the Greek Zeus, the Hindu Indra, or the Norse Thor, or any of a thousand other Storm Gods around the planet—is a *personification* of the forces of wind and rain and cloud. And in fact, to put it bluntly, the Storm God *is* the storm, brought to life by human belief. For this reason, in ancient Greece for example, people would not say "*It* is raining" (as we do, using the neutral 'it' to designate "nature"), but rather they would say "Zeus is raining", because Zeus was believed to be the Storm itself.

Countless other examples of this form of Analogy could be cited from archaic religions of the past, as well as the many contemporary Archaic societies still to be found around the world. All the same, as the intellectual life of our species has advanced, some of us have acquired the ability to see through these personifications; as a result, few of us today who are educated in the modern Western tradition think of a storm as a person. Nevertheless, traces of these two principle ideas of Magic can still be seen even in modern versions of Religion, and the Eucharist of the Catholic church, for instance—in which ritual the wafer and the wine either *represent* (by the magic of Analogy) or actually *are* (by the magic of Metonymy) the body of Christ—apparently embodies these very ideas.

Figures of Speech

Considering the importance of both Metonymy and Analogy, which today we recognize for what they are—figures of speech—it will be helpful to consider figures of speech *in general*. Accordingly, a table of the most common figures is provided in Table 1-1, in which we see the figures arranged according to two main categories, typically called Tropes and Schemes.[6] In

addition to this two-fold categorizing of the figures of speech, we see also (along the top of the figure) the various ways that we can focus, as it were, on each of these categories. And following the table is a list of the figures included, along with a brief definitions:

	Resemblance	**Emphasis**	**Sound**	**Syntactics**
Tropes **(Semantics)**	Analogy Metaphor Simile Personification Allegory Conceit Symbol Contrast Euphemism Metonymy Synecdoche Kenning Allusion	Ambiguity Persiflage Irony Antithesis Oxymoron Paradox Hyperbole Litotes		
Mixed	Malapropism	Amphiboly Bathos Climax Rhetorical Question	Pun Spoonerism	Parallelism
Schemes **(Syntactics)**			Parachesis Alliteration Anadiplosis Anaphora Antistrophe Homoioteleuton Euphony Cacophony Onomatopoeia	Acrostic Anagram Anacoluthon

Table 1-1. Selected Figures of Speech

Selected Figures of Speech

Acrostic: (end-line); the spelling of a word or phrase using the 1st letter of each line.
Allegory: the extended use of symbolism, as in an image or an Aesopian fable.
Alliteration: a form or Parachesis in which consonant sounds are repeated.
Allusion: indirectly referring back to a previous composition.
Ambiguity: vagueness; the intentional use of indeterminate meaning.
Amphibole: ambiguous meaning from slovenly syntax.
Anacoluthon: grammatical inconsistency; deviation in sentence structure by not finishing as intended; lacking part of the second sentence in a compound.
Anadiplosis: doubling; the rhetorical repetition of one or several words.
Anagram: rearranging the letters of a word to produce another word.
Analogy: a comparison of similarities, as of ratios or properties, etc.
Anaphora: ('re-carrying'); the repetition, with emphasis, of a word or phrase through several successive clauses.
Antistrophe: counterpart; the repetition of a word or phrase as the end of successive clauses.
Antithesis: opposition; the contrast of ideas by juxtaposing opposing terms, such as "frightfully nice". Oxymoron.
Bathos: triteness; unexpected use of a colloquialism or of lower diction in formal literature.
Cacophony: ('bad-sounding'); harsh or unpleasant sounding words; discordance.
Climax: using the last word of one clause as the first word of the next clause, in a climactic manner. *Gradatio*.
Conceit: strained metaphor; the juxtaposition of unrelated figures of speech, as in "dog-fight like rose and thistle"; extravagant metaphor.
Contrast: Comparing objects to emphasize their differences; a negative Analogy
Euphemism: ('well-said'); using a less direct expression in place of an offensive one.
Euphony: ('good-sounding'); pleasant sounding words or speech.
Homoioteleuton: ('same-ending'); rhyme at the end of consecutive lines, as in poetry.
Hyperbole: ('over-thrown'); overstatement; an exaggeration for effect, as in "older than time".
Irony: expression in which the intended meaning of the words is the opposite of their literal or natural meaning.
Kenning: compounding; the combining of two or more words to designate a single object, such as "whale's bath" for "sea" or "sea shore" for "beach".
Litotes: (simplicity); understatement to intensify; affirming by the negative of the contrary; Meiosis.
Malapropism: the comic misapplication of a word or phrase.
Metaphor: a brief analogy; the comparison of likeness without a comparative term or phrase.
Metonymy: ('change-of-name'); substituting a closely related term for the intended term, as when a construction worker is called a "hard hat".
Onomatopoeia: ('name-making'); the mimicking of a natural sound by the word or phrase used to signify the sound, such as 'loud' and 'whisper'.
Oxymoron: a two-word contradiction. Antithesis.
Paradox: a logical contradiction. Oxymoron.
Parallelism: identity of syntactical or semantic structure in two or more lines, as in some Hebrew poetry.
Parechesis: likeness of sound; repetition of phonemes (alliteration is initial parechesis).

Persiflage: (‘to-whistle’); irresponsible talk, to be comprehended in whatever way, without assuming sincerity in the speaker.
Personification: the representation of a non-human object as a person or with the characteristics of a person, such as in the Pathetic Fallacy.
Pun: a humorous playing on the various meanings of homonyms.
Rhetorical Question: a question not intended to be answered. *Interrogatio*; *Erotema*.
Simile: the comparison of likeness in which a comparative, such as ‘like’ or ‘as’, is used.
Spoonerism: a form of garbled speech (often a common usage) in which earlier phonemes are exchanged with later phonemes, such as in “tons of soil” from “sons of toil”.
Symbol: a (partially or wholly) unconsciously understood sign or figure.
Synecdoche: using a part to represent the whole, as with the word ‘hardhat’ in the sentence, “My brother is a hardhat”, for “My brother is a construction worker”.

Of the two major types of figures, the Tropes and the Schemes, the latter (which will not interest us here except insofar as to note their use) are created by modifying, as the labels show, either the sound of words (and thus their form) or the structure, the syntax, of the sentences in which the Schemes are used. The focus of the Schemes, thus, is grammatic order—either the order of sounds in words (as studied in Morphemics) or of words in a sentence (as in Syntactics). For example, the figure of speech known as Parachesis, which is also called Alliteration, is the repetition of vowels or consonants across several words in a given sentence. This figure thus illustrates the modification of Syntax (because the *repeated* sound determines, in part, the structure of the sentence) by means of a modification of morphemes (the *shape* of the sound of a word). An example with which most of us are familiar is the old tongue twister, “She sells sea shells by the sea shore.”, in which word-forms (morphemes) are chosen for their ‘s’ sounds. Other Schemes include Anadiplosis (the repetition of one or several words), Anaphora (the repetition of a word through several clauses) and Antistrophe (the repetition of a phrase used at the end of a clause). Finally, even the rhyming of words at the end of lines in poetry is a type of figurative Scheme, and it goes by the high-falutin’ name of Homoioteleuton (which simply means ‘same-ending’),. These Schemes, then, which are interesting enough, certainly find a variety of uses not only in our day-to-day speech but also in literature (in particular) as well as any political speeches that strive to be literary. All the same, Schemes are of little use in Science, except perhaps for emphasis or literary diction (note, for instance, the phrase Big Bang); and they tend to find their greatest use in politics and social issues. An unparalleled example of someone who could use Schemes to stir the emotions of his audience was the civil rights leader and excellent speaker Martin Luther King, whose *Letter from Birmingham Jail* is particularly inspiring, in part because of King’s expertise use of Schemes.

In contrast to Schemes, Tropes focus upon Semantics (or Meaning) rather than Syntactics and they are often called upon in Science, not to mention literature in general, as well as our day-to-day speech. Apparently, their effective manipulation of the meaning of words and phrases can evoke mental images that help us understand the often obscure ideas that modern Science invokes. Even more importantly, however, the general forms of the figures of speech constitute the forms of all human discourse; and the hisotrical process that has increasingly acknowledged

their role in language has spanned several centuries. As Daniel Chandler informs us in his *Semiotics, the Basics*, this historical process started with the Scholastic philosopher Peter Ramus, as early as the sixteenth century.[7] Chandler also points out, however, that Giambattista Vico is typically "credited with being the first to identify metaphor, metonymy, synecdoche and irony as the four basic tropes (to which all others are reducible)".[8] Ramus and Vico notwithstanding, however, when we consider these several figures in detail we soon realize that the distinction between Metonymy and Synecdoche, for instance, is merely specious, since Synecdoche is clearly a type of Metonymy (as even Chandler seems to suggest); and Irony—which entails that a person means or does the opposite of what he or she says—is a type of synecdoche itself (since opposite meanings are *parts* of the whole that binds them as opposites), and thus Irony too can be included under the heading of Metonymy. As a result, these reclassifications effectively reduce the number of so-called *master* Tropes from Vico's four to only two: Metaphor and Metonymy; and not surprisingly this classification is just what the semiotician Roman Jakobson developed in the mid-twentieth century.[9] Needless to say, Jakobson's classification—of Tropes as Metaphor and Metonymy—is more or less identical to the theory being proposed here, in which Analogy and Metonymy are clearly the equivalent of Jakobson's Metaphor and Metonymy. Accordingly, in the present text we have placed, and will continue to place, our focus upon Analogy and Metonymy as the two basic forms of Tropes.

Taking the latter first, we notice that Metonymy (which is basically a means of *renaming*) includes such figures as Synecdoche, Kenning, and Allusion (as shown in the Table 1-1). The first of these, Synecdoche, is of course the straightforward use of the part for the whole, as when a hired workman is called a "hired *hand*". Here the man is named indirectly by naming the part of his physical body—his hand—that is relevant to his work. Similarly Kenning, the compounding of two or three words into a figurative phrase, almost always involves direct Metonymy itself. Classical examples of Kenning are the use of the phrases "the whale's bath" or "the swan's road" for "the sea", both of which use Metonymy to name or refer to the sea by coining a phrase with the name of something (the whale or the swan) that is not the sea but is related to it in some manner. What is more, even such common phrases as "the sea shore" and "a light bulb" have Kenning—and thus Metonymy—as their foundation; and these and countless other metonymical phrases are part and parcel of the basic makeup of our day to day speech. Thus, as such examples show, we can view Kenning as a type of "kinning", in which a class of related objects—or *kin*; in this case the class of all shores or the class of all bulbs—is distinguished from some subset of the class—in this case, shores that hold back seas or bulbs that give off light. Allusion too, like Kenning, is metonymical, for we can justifiably view Allusion in general as a form of using the *whole* of literature, in the form of a previously created *part*—say, the title of an earlier influential text or story—to give weight to the part currently being created in our text. And finally Euphemisms, which admittedly are often analogical, can certainly be metonymical as well. Consider for instance the phrase "pushing up daisies"; this Euphemism for death—as indelicate as a discussion of this topic may be—invokes a *part* (daisies

growing) of the *whole* lying-in-the-grave situation. It thus uses lying-in-the-grave—which is, for us, typically a *part* of the *whole* death thing—in order to evoke the notion of death itself.

This last form of Synecdoche, Euphemism (not to mention much Kenning itself), entails the straightforward relationship of part to whole or whole to part. However, other types of Synecdoche, accordingly to Chandler, involve the relationship between what he calls the superordinal class and its members. One example he gives is the use of the term "vehicle" (the superordinate class) for "car", which is merely one type of vehicle, and this is a member of the class of vehicles.[10] Nevertheless, the notion of whole and part is perfectly apparent in all of these phrase-forms, and the distinction between these two types of Synecdoche—superordination as opposed to that of part-for-whole—seems to depend upon whether the relation involved is formal or material, respectively. And ultimately of course, all Synecdoche is metonymical, since the referent of the Synecdoche (such as the car above) is not named directly but rather by means of something related to it (such as the class "vehicle"). In addition, Chandler lists several other relations that may be viewed as metonymical as well;[11] and since his lists supports the position put forth here, it will do well to consider the two most relevant instances of these relations. The first of these is given as "producer for product", such as when we say "She owns a Picasso" to mean "She owns a *painting made by* Picasso". Here the relationship is clearly one of *generation* (Picasso having generated the painting), and this is clearly a relation of part-to-whole—the whole generates a new part—and thus is metonymical. The second form of Metonymy we take from Chandler is given as "effect for cause", such as when we say "Don't get hot under the collar!" when we mean "Don't get angry!" Here, of course, no further comments are necessary, since this is the straightforward employment of Metonymy, in which anger makes the part of the body under the collar—the neck, that is—hot.

Turning to Analogies, we may start with the familiar by noting that Metaphors and Similes are obvious types of Analogy: Carl Sandburg's "The fog comes / on little cat feet", which uses a Metaphor, or Robert Burns' "O my Luve's like a red, red rose," which uses a Simile, both rely upon comparisons—a comparison of the fog and the cat in the first case, and of "my Luve" and a rose in the second. But among Analogies we may also include 1) Conceit, which is a mixed Metaphor that is nonetheless poetical (such as when Elvis Costello sings about lovers who "dog fight [a metaphor], like rose and thistle [a simile]"); 2) Personification, as with the cat-like fog in the above poetic quotation; 3) Allegory (a type of extended Metaphor), as in the allegorical French poem *The Romance of the Rose*, which is an extended allegory of sexual love in which the allegory is cast in the form an assault upon a secluded "garden"; and the literary Symbol, such as Goethe's *Faust*, whose titular character is a symbol of Humanity as Scientist. Contrast, by comparison, is a form of inverse Analogy, for it is a comparison for the sake of elucidating *dis*analogies; whereas Hyperbole (or Overstatement) is straightforward Analogy: if you say of someone that he is "older than dirt" (the Hyperbole) then anything true of dirt because of its great age will, *a fortiori*, be true of him as well. And Parallelism, too, especially when the parallel phrases are semantically (as opposed to grammatically) parallel, are analogies. This form of

metaphorical modeling is common in Hebrew (and other Afro-Asiatic) poetry. When, for instance, in the Biblical love poem known as *The Song Of* Songs,[8] the lover says that:

> I gathered my myrrh with spice,
> ate my honeycomb with honey.

he is implying that both of these acts—gathering spice and eating honeycomb—are analogous to the sexual act and, therefore, to each other in some respect. And finally, Zeugma, which is a form of Brachology or Brevity—in which two nouns use the same modifier or verb when this is appropriate to only one of the nouns—is a sort of counter-analogy. Consider, for example, Bob Dylan's beautiful little song *The Three Angels*,[9] which gives us the line:

> The dogs and pigeons fly up and they flutter around,

evoking images of winged dogs fluttering about, as if dogs and pigeons were somehow analogous. Certainly, this analogy is not serious, but it seems to be intentional and undeniably is evocative in the context of the song (recalling, of course, that angels too have wings).

As should be apparent by now, all of the figures of speech that we have mentioned here are either forms of Metonymy or of Analogy. And all of these types of figures (and many more that we have not mentioned) may well have been used throughout the history of modern language—for perhaps some thirty thousand years—to both create and extend our thoughts about the world. To quote Giambattista Vico directly:

> It is noteworthy that in all languages the greater part of the expressions relating to inanimate things are formed by metaphor [or Analogy, as we would have it] from the human body and its parts and from the human senses and passions. Thus, head for top or beginning; the brow and shoulders for hill; the eyes of needles and of potatoes; mouth for any opening; the lip of a cup or a pitcher; the teeth of a rake, a saw, a comb; the beard of wheat; the tongue of a shoe; the gorge of a river; a neck of land; an arm of the sea; the hands of a clock; heart for center . . . ; the belly of a sail; foot for end or bottom; the flesh of fruit; a vein of rock or mineral; the blood of grapes for wine; the bowels of the earth. Heaven or the sea smiles; the wind whistles; the waves murmur; a body groans under a great weight.
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> In such a logic [which Vico calls "poetic logic" but we would call *figurative* Logic], . . . the first poets had to give names to the things from the most particular and the most sensible ideas. Such ideas are the sources, respectively, of synecdoche and metonymy. Metonymy of agent for act resulted from the fact that names for agents are commoner than the name of acts. Metonymy of subject for form and accident was due to inability to abstract forms and qualities from subjects. Certainly metonymy of cause for effect produced in each case a little

> fable, in which the cause was imagined as a woman clothed with her effects: ugly Poverty, sad Old Age, pale Death.[12]

According to Vico, then, Analogy [rather than Vico's "metaphor"] and Metonymy were fundamental to the intellectual development of modern humans; and numerous myths from around the world attest to this fact. This is Vico's position, and, as we have seen, many recent or current semioticians, anthropologists (recall Kluckhohn and Parsons, mentioned above), and philosophers would not argue the point.

With the advent of Science and Philosophy in the early sixth century BCE, a change in attitude occurred toward the mythological explanations of how the world came into being. In particular, the notion of Analogy was made explicit in Pythagoras' theory of tuning musical instruments, while that of Causality can be seen in Xenophanes theory of the origin of seashells high in the mountains of southern Italy. And in recent times, a further rationalization of our intellectual attitude towards the World has added a touch of rigor to these originary scientific concepts. The concept of Analogy, for instance, whose figurative version we saw above as the foundation of Imitative Magic, has been replaced in late modern times by a more rigorous concept, which involves the relation known as Isomorphism (a Greek word that simply means "sameness of form", although 'homology', which is linguistically closer to "analogy" and means more or less the same thing as 'isomorphism', is often used as well). Similarly Metonymy, the fundamental principle of Contagious Magic, which becomes Causality in Western Science, has been replaced with the relation of Contiguity (which derives from a Latin word for either "succession" or "touching"). And the transition from the old underlying *figurative* concepts to their newer, more rigorous *relational* forms is nicely illustrated by two texts published about twenty-five years apart, at the beginning of the scientific enlightenment of the eighteenth century. The first of these, Vico's *Principles of the New Science*, which he published in 1712 (and to which we alluded, above), attempts an early scientific explanation of "the common nature" of humans. As we have seen, Vico argues that Metaphor (which, you must keep in mind, is a type of Analogy) and Metonymy (not to mention Irony and Synecdoche, which Vico includes but which we reject, here) "were necessary modes of expression" for Paleolithic peoples.[13] And although Vico is here still referring to the *figurative* use of Metaphor and Metonymy, he has at least begun to make these concepts themselves explicit to their users. And very soon after Vico's text—in fact, within twenty-six years, in 1738—the philosopher David Hume was able to further this process of rigorization—of making the fundamental concepts less figurative and more analytical—by analyzing and clarifying what in his *A Treatise of Human Nature* he called "resemblance" and "contiguity". There, Hume says, when explaining how we humans come to associate or connect various ideas, that the means "by which the mind is . . . conveyed from one idea to another are three . . . , [and these are] *resemblance*, *contiguity* in time and place, and *cause and effect*."[14] But are not Hume's *three* "means" really our *two* modern concepts—Contiguity and Isomorphism—thinly disguised? Certainly they must be, for Hume's first "means", *resemblance*, is already moving toward the *foundation* of Metaphor and

Analogy—towards Isomorphism; and Hume's second "means", *contiguity*, is nothing but the introduction of the modern term itself. And as for *cause and effect*, Hume's third "means", this we summarily dismiss, because *cause and effect* turns out to be nothing but Contiguity in a specific form, as Hume himself acknowledged (and as we shall see in Chapter Five). The analysis presented here thus reduces Hume's *three means of association* to the *two types of relation* given above: Isomorphism and Contiguity. And as we shall see soon enough, these two relations are fundamental to our Logical studies.

Unfortunately, intellectual progress is often painstakingly slow, and it was actually not until some two hundred years after Vico's book that scientists and philosophers began to use the term Isomorphism (or its synonym: Homology) to denote the logical basis of Analogy. This change, as we will see later in this chapter, took place for the most part in the late nineteenth century (when two men formulated a new field of study that is now commonly called Semiotics). In the mean time, we must keep our focus upon our topic here, which concerns the relationship between archaic Religion and Philosophy, although here we have cast this relation in terms of Magic and Science. In fact, the full comparison involves all four of these institutions, for it invokes Magic and Religion, on the one hand, and Science and Philosophy on the other. More specifically, what Religion is to Magic—a broader set of concepts, a World-View, used as the context to help us understand the World we learn about from Magic—so Philosophy is to Science—a broader set of concepts, a World-view, that allows us to understand the Universe of modern Science. But whereas Magic uses the figurative Metonymy and Analogy, Science uses the more rigorously developed forms of Causality and (literal) Analogy. And just as archaic Religion, at least in one sense, uses the Figures to provide a world-view based on Magic, so Philosophy, too, performs the same service through Science, only now by means of a more rigorous conception of the same ideas. Thus, as with Magic and Science, Religion and Philosophy are based upon similar *kinds* of activities, and they thus share a common structure. Admittedly, the World-view provided by Religion employs these two overarching concepts in a drastically although understandably different way than that of Philosophy; but each World-view does this for the same reason, which is to allow us to understand the World we live in.

For the sake of clarity, a brief summary of some of the differences and similarities of these two world-views is given below. There we see that, whereas Magic and Religion employ *Personification* (again, a type of Analogy) to give divine life to environmental forces, thereby making these forces in effect supernatural persons, Science and Philosophy use *Reification* (a type of Metonymy) to turn these forces into *natural* forces, thereby making them natural objects. In addition, the summary notes that the language of Religion is what we call *Mythos*, in which Analogy and Metonymy have their figurative, poetic forms; while in Philosophy, by contrast, language usually takes the form of what we call *Logos*, or Logic, which uses the more rigorous forms of the fundamental relations—not Analogy and Metonymy, but Analogy and Causality, respectively—to work its "magic".

1) The Symbolic Paradigm (30,000 Years Old)

Religion: A cognitive perspective of the World based on Personification (Analogy)
The World: The symbolic view of the Sky-and-Earth environment as a Person
Personification: The belief that the Forces and Forms in the World are Persons

Magic: Understanding and Manipulating the World through Metonymy and Analogy
Contagious Magic: Physical-contact Magic inspired by Metonymic Figures of Speech
Imitative Magic: Formal-resemblance Magic inspired by Analogic Figures of Speech

Mythos: The Language of Metonymic and Analogic Figures; used in Magic and Religion
Metonymy: Figures of Speech based upon the relation of a Part to the Whole
Analogy: Figures of Speech based upon the relation of the Similarity of Form

2) The Natural Paradigm (3000 Years Old)

Philosophy: A cognitive perspective of the Cosmos; based on Reification (Metonymy)
The Cosmos: The *order* that *adorns* the collection of Natural-Things
Reification: The belief that Forces and Forms are Natural-Things (L. 're' = E. 'thing')

Science: Understanding and Manipulating the Universe through Causality & Analogy
Inductive Science: Causality and Analogy in the Logic of Natural Things
Deductive Science: Implication and Equivalence in the Logic of Symbols

Logos: The Language of Causal and Analogical Structures; used in Science and Philosophy
Causality: The Generation of one thing *from* another; based upon Contiguity
Analogy: The Comparison of one thing *with* another; based upon Isomorphism

Of course, many other differences between archaic Religion and Philosophy, and certainly some similarities, could be listed and discussed here, but we have neither the need nor the room to consider these at the present time. What is important for us is the fact that both Religion and Philosophy constitute, at least in part, World-views for those of us who subscribe to them. And as intriguing as it might be to investigate both of these World-views in greater detail, our job here is rather to come to grips with the World-view of Philosophy in general, and in particular with the *language* of Philosophy—Logic. Let it simply be said then that, not unlike the relationship between archaic Religion and Magic, Philosophy constitutes an intellectual framework—a context, if you will—for the findings of the sciences, and by creating and expanding upon this context philosophers have constructed a rational and realistic view of the world based upon the many different sciences. Accordingly, we shall now focus our attention on the relationship between Science and Philosophy.

Science and Philosophy

Up to this point we have investigated the external nature, as it were, of Philosophy, having asked what *kind* of thing Philosophy is; and in doing so we have compared it to Religion. We saw that among other things Philosophy, like Religion, provides us with a World-view. Now however, we must ask what it is *specifically* that Philosophy does, for only this can lead us to Logic itself; and for this we turn to the *internal nature* of Philosophy and ask "What are the inner workings of Philosophy?".

Biological Imperatives and the Three Branches of Philosophy

To begin this part of our investigation, we consider the details of the relationship between Science and Philosophy, details that can be illustrated nicely by the relationship between the science of Biology and the philosophy of Axiology, the philosophy of human values. As suggested above, Biology, as Science, will supply the basic facts—which here will be the basic facts of *life* itself—while Axiology, as a branch of Philosophy, will interpret these facts and put them into proper perspective: the world-view. The facts of Biology that concern us are what are called "the biological imperatives for species propagation", which is just a fancy way of denoting those tasks that all sexually-reproducing creatures need to perform in order to keep *themselves* alive long enough to actually reproduce, and thereby keep their *species* extant. These biological imperatives are summarized quite beautifully in the very first paragraph of an *Encyclopedia Britannica* article on "Animal Behavior". As we learn there:

> Animal behavior (ethology) includes any activity of an intact organism. A living animal behaves constantly in order to survive, and all animals must solve the same basic problems. They must, for instance periodically replace their energy source (consume food), avoid dehydration (drink), avoid becoming another animal's energy source (avoid begin eaten), maintain their body surfaces (clean and groom), and reproduce.[15]

The imperatives listed here can be understood a bit more readily if we list them together, and reword them just a bit, without of course changing the meaning of the quoted passage. From this rewording we see, then, that biology—that is, not the science of Biology, but *animate life* itself: biological life—demands that we:

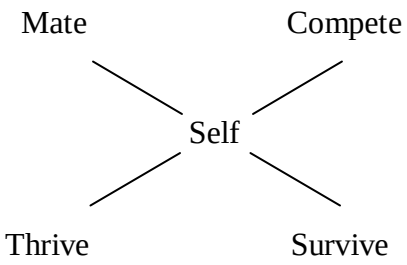
1) Periodically consume food
2) Periodically consume water
3) Periodically avoid becoming food
4) Periodically maintain the body

} *Sustenance*

5) Periodically find and couple with a Mate => *Reproduction*

Now, as indicated by the labels on the right, these several imperatives are naturally grouped into two classes, and in this sense there are only two biological imperatives, which may be stated very succinctly as 1) *Live*, and 2) *Love*. Ultimately however, we need to have a bit more detail, and here we will assume that living creatures need actually to respect *four* imperatives. For, in order to really live, we of course need 1) to *survive*, which simply means that we need to keep ourselves alive; but we also need 2) to *thrive* as well, so that we are actually healthy enough to fulfill the remaining imperatives. And these are 3) to *compete* with others of our kind so that we can win, in a manner of speaking, a partner with whom we can then 4) *mate* (and, we hope, reproduce). Thus the biological imperatives actually command us to Survive, to Thrive, to Compete, and to Mate; and these four imperatives are illustrated below, where we see the Four Biological Imperatives in relationship to ourselves, or to any living Self in general.

The Biological Imperatives:



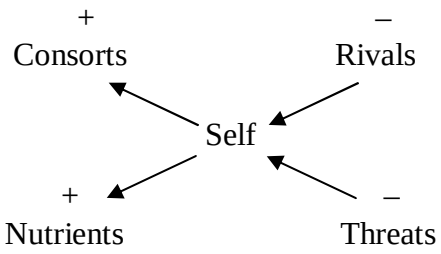
A Summary of the Biological Imperatives:

1) Survive: Periodically Identify, Locate, and Avoid Threats
2) Thrive: Periodically Identify, Locate, and Consume Nutrients
3) Compete: Periodically Identify, Locate, and Eliminate Competitors
4) Mate: Periodically Identify, Locate, and Engage Consorts

These four biological imperatives are the facts of life, as it were, albeit at a bare minimum. But even this small amount of science leads to a whole lot of philosophy, to put it colloquially; for from these four imperatives we can derive four philosophical ideas—two of which are negative and two of which are positive. To be a bit more specific, in order to survive and thrive we must overcome physical *suffering* and attain physical *satisfaction*—that is, we must satisfy our basic needs for food, water, and shelter so that our bodies can avoid suffering and we can actually prosper. In addition, if we are to overcome the competitors in our "battles" in which we compete for a mate, we must face and defeat these *rivals*, and thereby convince our potential *mates* of our "mate-worthiness".

These, then, are the tasks of life—to survive, to thrive, to compete, and to mate—and they deliver a system of biological *values* illustrated in the diagram below. In this figure we see two negative biological values, given on the right side—Threats and Rivals—and two positive values—Nutrients and Consorts—given on the left. This little bit of value philosophy—what we have extracted as philosophically significant from *The Biological Imperatives*—is fairly apparent in the biological imperatives themselves. What we have so far, however, is not a full-blown philosophy of value, not a complete Axiology; for that, we must extract yet more information from the data, some of whose results are illustrated in Figure 1-1 (which is basically an elaboration upon the diagram of *The Biological Values* given below). In this figure, the

The Biological Values:



biological imperatives are given in terms of *human*, as opposed to animal, biology; and here, as before, we see what we may call the two physiological values—those of the Pain of Suffering and the Pleasure of Satisfaction—but now associated with what are here called the *Two Alternatives* for each individual human in the physical world. These alternatives—Life and Death—are ultimately the only two options we have as animals; and they stem from our *suffering* the needs of a living body, on the one hand, and the *satisfaction* of those needs on the other hand. And of course we become aware of those sufferings when we feel the *pain* of our body's needs; as a result, we satisfy these needs, and the body then feels *pleasure*. Pain and Pleasure, thus, can be used as two physiological guidelines (called the *Two Physical Values* in the diagram), two forms of *feeling* that help us find our way in the physical world, and thereby help us orient ourselves, as it were, between the *Two Alternatives* of Life and Death. Using these guides, we can maneuver our way through the labyrinth of physical existence, avoiding as best we can whatever might cause us Pain, Suffering, and Death; and, if we are fortunate, acquiring whatever will give us Pleasure, Satisfaction, and Life. In this way we cast Pain and Death philosophically, as what we may call the Awful aspects of the physical human condition—aspects that we wish always to avoid. And similarly we recognize Pleasure and Life as what we may philosophically call the *Awesome* aspects—those we wish always to attain. And now, finally, in these new terms—in the notions of the *Awesome* and the *Awful*—we have a set of polar opposites between which we can arrange the whole spectrum of the values associated with our feelings and our emotions.

In the philosophical tradition, these physical (or, more properly, physiological) values are commonly called Aesthetic Values, from the Greek word 'aisthetikos', which means "to feel". And although these days the word 'aesthetics' typically evokes ideas of about Art, the Greek 'aisthetikos' referred to our normal, everyday feelings and perceptions. And since we experience our feelings in two ways—either as Pain or as Pleasure—these two classes of feelings can be employed as the natural basis for the two fundamental Aesthetic Values—the Awful and the Awesome—as given in Figure 1-1. Accordingly, the Awesome, which begins with Pleasure, constitutes the positive pole, while the Awful, which begins with Pain, constitutes the negative pole of what is in effect a physiological "axis of orientation". The Awesome and the Awful thus provide standards of judgement for the full gamut of Aesthetic Values, among which we can certainly include the traditional "Platonic" Aesthetic Values—those of the Beautiful and the Ugly (although the latter is certainly an unfortunate term). In addition, however, these two poles of physiological orientation—the Awesome and the Awful—encompass such awesome experiences as what are typically called the Sublime and the Ecstatic, among which we can

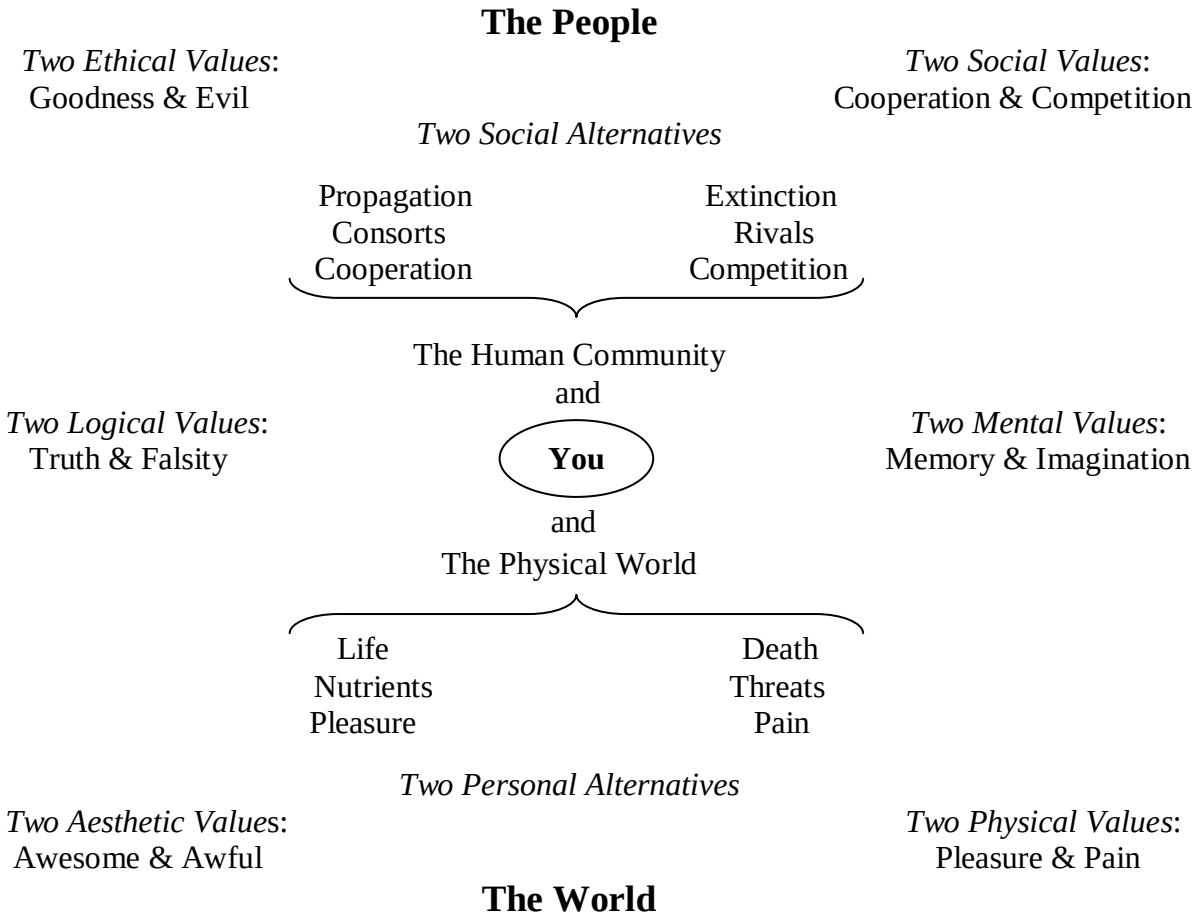


Figure 1-1. The Four Biological Imperatives and the Philosophy of Values

include sexual pleasure and religious ecstasy, as well as such awful experiences as Anxiety and Angst, which accompany our thoughts about the most awful aspects: disease and death.

This pair of Aesthetic values constitutes the beginning of our Axiology, of our philosophy of values. Still, it is only the beginning, for there are other classes of value that are relevant to human existence. To begin with, we do not live only as individuals, but are all members of the group called the human species. In addition, then, to our *Two Alternatives* for our individual existence, as given in the figure, we have also *Two Alternatives* for the existence of our species as a whole, alternatives derived from the remaining two biological imperatives: those that compel us to *compete* and *mate*. Accordingly, we have, on the one hand, the possibility of the Extinction (a type of death) of our species, and on the other hand the possibility of the Propagation (or life) of our species. And just as, on an individual level, we need to strike a balance, as it were, between Pain and Pleasure in order to avoid Death and sustain Life; so on the level of the species we need to strike a balance between the negative pole of our *Rivals* and the positive pole of our potential *Consorts*, in this way avoiding Extinction and ensuring Propagation. For this, we typically establish rules of behavior—guidelines, often called *mores*—that produce more or less stable social groups in which rivalry can take place in such a manner as to not disrupt the social stability to the point of extinction.

Given our *long evolutionary history* as a species that emphasizes *culture*, the beginning of this development of social norms must have occurred quite unconsciously; perhaps even more than a million years ago, when humans first inventing language. At any rate, and fortunately for all of us, this social development obviously *did* occur, and it continues to occur to this very day. Witness, for example, the relatively recent establishment of the United Nations or, even more contemporarily, the widespread effort to establish a multi-cultural global society. The philosophical side of all of this species-biology is known as the philosophy of Ethical Values, or Ethics: the study of the assortment of social mores, norms and conventions, rules of social behavior, etc., that determine our behavior and can (and actually do) vary enormously from culture to culture. Understandably, the details of our moral philosophy or Ethics will tend to be more complicated than those of our Aesthetics, since the natural basis of Aesthetic philosophy—Pleasure and Pain—is much more immediate and personal than is the basis of morality, which is highly "mental". Nevertheless, Ethics, as a branch of Philosophy, rests upon as firm a ground as that of Aesthetics, even if this ground is much more precipitous and much less steadfast than the Aesthetic ground. For, as we see in the figure, the propagation of our species depends upon the Cooperation of individual humans so that these individuals can have access to each other as Mates, and thereby to reproduction. But given human emotion, these rules of Cooperation are not always easy to follow. In addition, the individuals must also learn how to participate in the Competition with Rivals so that, although the competition be fierce and occasionally brutal, it sill does not lead to the extinction of the species. Accordingly, just as we must learn to use Pain and Pleasure to help us balance ourselves between personal Life and Death (with an emphasis, of course, on Life); so we must also learn to use Competition and Cooperation to help us balance our species between Propagation and Extinction (and again, with

the emphasis upon Propagation). The end result of all this, at least in philosophical terms, is the development of the philosophical theory of Social or Ethical Values, known as Ethics. And just as in Aesthetics, in Ethics we use these two "natural" values, the Social Values of Competition and Cooperation, as the basis for our philosophical, Ethical Values: Goodness and Evil. In this way these social standards, whose imperatives constitute the natural Social Values denoted in the figure by the terms Cooperation and Competition, inform each culture, each social group, about what is socially Evil—the equivalent, as it were, of the physically Awful—and what is socially Good—the equivalent of the physically Awesome—according to each particular society. Social Goodness and Evil (on the Moral plane), then, like the Awesome and the Awful on the Aesthetic plane, are the positive and negative poles, respectively, of our second "axis of orientation" in value theory, the axis of Morality or Ethics.

Having explicated the scientific basis of this much Axiology (deriving our Axiology from the Biological Imperatives), we might seem to have gone as far as we can along this path, and this is certainly true of what philosophy we can squeeze out of the imperatives. At the same time, all four of these Biological Imperatives owe their origin to pressures in the world that bear down upon us (which pressures of course includes other human beings, as we have seen). And although we could certainly stop here if this were the whole story, truth be told this is simply not the whole story. For we would not have even this much of Philosophy were it not for the single most important value-axis in our intellectual lives. And although this value-axis is one which we have not yet considered, it has nevertheless been driving us all along, for it is the axis of our *consciousness* itself. Without human consciousness—particularly as we find it in the last fifty thousand years—there would be no Philosophy of Value and, certainly no texts in Philosophy, like the one you are now reading. But of course we do have Philosophy texts, and we have Philosophy in general, all thanks to the fact that we humans are *conscious*, and in a very unique way. Thus, if we were to leave consciousness out of the story we have told of human values, this story would be incomplete. We must, therefore, add one last axis of orientation to the Aesthetic and the Ethical axes of our Axiology, as developed so far, for we must add the Logical axis—the axis that helps us understand how we come to find ourselves in the World of Aesthetic and Ethical values, or even in *any* World at all.

For our understanding of this third axis the most important dichotomy is that between what we typically see as the "outer" pole of consciousness—the pole that represents what we typically call *Reality*—and the "inner" pole of consciousness that is our personal *mentality*. Now, among the most startling aspects of this inner pole—our *mentality* itself—is the fact that it allows us to experience what is in effect a *second* world, as it were—the world of our dreams. For, many arguments to the contrary notwithstanding, the "world" we call Reality—the outer world—is simply not the same as the world we experience in our dreams. In our dreams, for example, we can fly, more or less like Superman; but in Reality we certainly cannot. And in general, we find that in our dreams we can do things—or rather, the Dream World itself allows of things—that simply are not possible in the Real World , the world of our waking consciousness. In the Real World, for instance, the various events in our lives follow one another in a regular progression,

as it were: day follows day, month follows month, and year follows year. This is not to say, of course, that our lives are always as regular as the flow of time, for many obstacles may confront us each day, making our lives more or less hectic. But the flow of time itself is regular, and this regularity of the succession of moments, of days, and of time in general, impresses itself upon our consciousness. In addition, often when a given event occurs within the flow of time it is *always preceded* by the same event; and thus time not only flows incessantly forward, but there are also numerous *necessary* links that can be followed backwards in time, and these backward links establish what we call *causal chains*, not to mention the notion of Causality itself. In dreams, by comparison, the regular flow of day to day is absent, for the most part; and dreams seem to occur in their own Dream Time, so to speak. And even if a given dream seems to involve a regular sequence of events, or even a regular or *Real* Time, this does not preclude the possibility that the sequence can suddenly shift at any time, with the dreamer finding him- or herself at what, after a *discontinuous* jump, would appear in the Real World to be a different point in the time sequence. Dream Time, then, distinguishes itself from Real Time by its failure to be strictly *contiguous*, and Contiguity itself—the necessary, physical connection between moments of Time as well as between components of a Causal Sequences—constitutes the basic Logical thread, as it were, of Time and Causality in the Real World.

Much the same can be said of Dream *Space* as well, as opposed to the space of the Real World. For in the Real World space is apparently continuous, or (like Time) is at least *contiguous*, and each point of space is *physically adjacent* to its immediate neighbors. Consequently, if we wish to move about in Real Space, traveling from wherever we are to some distant point, we must pass through all of the intervening parts of Real Space to get there. In addition, whenever we do move about in Real Space we find that this *spatial* Contiguity is present *wherever* we go, and Space thus has the same exact "form" (and is said to be *isomorphic*) throughout. As a result, if some object in the Real World is tied somehow to a given location in space—as, for instance, are our houses—the object will not also be tied to a different location—that is, our houses will not be in two places at the same time. In a dream, in contrast, we often find ourselves magically transported to a different location than that in which this particular dream has been unfolding, and some of the objects that we left behind (and which in the Real World could not be removed from their original spatial location) might even already be present in the new Dream Space setting. Dream Space thus is apparently not contiguous, nor is it isomorphic, for it is capable of possessing different non-contiguous structures at different (and hence non-isomorphic) locations.

All of this, along with other similar quirks, serves to suggest that the Dream World does not follow the same spatio-temporal restrictions as waking Reality, the restrictions of space and time that, being necessary—that is 'ne-cessare', which means 'never ceasing'—are properly called *Logical* restrictions. Reality thus involves, on the one hand, the Logical notion of Contiguity—the very Logic, as it were, of *Time itself* (and of Causality, as we shall see)—in which certain events are necessarily (which is to say *always*) preceded by other events (as we will learn in Chapter Five). And on the other hand, Reality involves the Logic of *Space*, which is of course

Isomorphism; for no matter where we go in Real Space we find the *same* three-dimensional *form* of contiguous points. These two Logical relations thereby constitute, as it were, the necessary, Logical frame-work—the very fabric, in fact—of Space-Time itself, and thus of spatio-temporal Reality. And needless to say, this necessary frame-work of Reality is the very frame-work that the Dream World all too often lacks.

Far from being like the Dream World, then, whose structure can be quite inconsistent, we find that the Real World is spatio-temporally reliable; its frame-work, its very structure, is *necessary*, whereas in the dream World what passes for space-time turns out to be as ephemeral as a cloud in a desert sky. Consequently we may conclude (for the sake of the argument we are putting forth here, at any rate) that our mental Dream World is in many respects less *reliable* than the Real World; and as a result we can take what we do find in the real World as the hallmark of reliability, in effect, as a guarantor of what is trustworthy. And from this notion of the reliability of Reality we can (and, in fact, do) derive the notion of *truth*, thereby establishing Reality as the standard of truth (and rendering the Dream World more or less representative of what need not be true, and in fact is often false). In this way, the True and the False come to be recognized as the two poles of our final axis of orientation—what we may call the Logical axis—and they are based upon the opposing guidelines of Reality and Fantasy, respectively. Of course, it is certainly possible that Reality is just another Dream World, one that *we* fabricate, as we do our dreams, and hence an unreliable guide. But if Reality *is* just another dream, it apparently is one that is so significantly different from our normal dreams that if we fail to take note of and use the Logical fabric of Reality we may well find Reality putting an end to our lives. This, as it need not be pointed out, would not be good, neither for ourselves nor for our social group; and for this very reason learning the difference between Reality and Fantasy—and ultimately between what is True and what is False—turned out to be so very critical in the history of human evolution.

In Figure 1-1, the natural value that leads to the notion of the Philosophical Value called Truth is represented by the term Memory (since, by definition, we can only *remember* that which truly happened), while the value of Falsity is represented by Imagination. And with this third and last axis of orientation we have in effect completed our philosophical analysis for the present time. Before moving on, however, we should note that although we started with the least bit of science—the four biological imperatives—we have been able to formulate a fairly complex Philosophy of Value. Not only have we constructed values that are quite obviously based upon the notions of Opposition and Polarity—such as the opposite values of Good and Evil—but we have done so in several different human dimensions, as it were. Each of our three "axes of orientation" is in fact a pair of opposites representing a distinct "dimension" of life, with 1) Truth and Falsity representing in many respects the most fundamental level—the Logical dimension; 2) the Awesome and the Awful representing the most immediate level—the Aesthetic dimension; and 3) the Goodness and Evil representing the most truly human level—the Ethical dimension. By combining these three axes of orientation into a philosophical "phase space", as it were, we

humans have provided ourselves with a rich philosophical system, elicited from the simple science of the biological imperatives.

Surprisingly enough, something like this threefold division of Philosophy came very early in the history of the subject, for the philosopher Xenocrátes, who became the third head of Plato's Academy in 339 BCE, divided his Philosophy into three branches that are more or less identical to the axiological system developed here.[16] Admittedly, Xenocrátes could have been influenced by a fledgling Greek biology (for which there is evidence in Aristotle, at least). But he certainly did not have access to anything like the biological imperatives that we borrowed from the *Encyclopedia Britannica*. Nevertheless, Xenocrátes' three branches of Philosophy—which he called Physics, Logic, and Ethics—though they are not perfectly parallel to the three branches of our Axiology—Aesthetics, Logic, and Ethics—are certainly very close. And just how close they really are can be brought into perspective by setting Xenocrátes' three branches against the background of his philosophical system as a whole; ultimately even against the background of the whole of Platonic philosophy. For, although the remnants of Xenocrátes' writings are frustratingly fragmentary, it is fairly obvious that, like Plato, Xenocrátes divided the spherical universe into three concentric realms. In this system, the Earth—which the Platonic school had viewed as the realm of the Sensibles (the objects of sensation)—is in the center of the World; next, the Stars and Planets—the realm of the Opinionables (the objects of opinion)—wrap around the central Earth like the layers of an onion, giving us the "seven heavens"; and finally Heaven itself—the realm of the Intelligibles (the objects of our intelligence; Plato's *Forms*)—wraps around the realm of the Stars and Planets. In addition, Xenocrátes developed a spiritual trichotomy similar to this *physical* trichotomy, for he divided living beings into three classes: 1) Humans, who inhabit the centralized Earth; 2) Daimons, who inhabit the Sky and the planetary heavens; and 3) Gods, who inhabit the uppermost Heaven. And finally, Xenocrátes subscribed to the Platonic division of each human being him- or herself into three components, which include the Body, the Soul, and the Mind. Of these three, the body, quite naturally, is left on Earth when we die; but the Soul and Mind travel up to the Moon (the lowest planetary heaven), where we die a second time, after which the Soul is left behind and the Mind goes up to the Sun (and from there into the uppermost Heaven). Putting all of this together, we have the following system of Xenocrátes', to help us understand his three branches of philosophy:

1) *Intelligibles*:	
Gods	Logic
Minds	
2) *Opinionables*:	
Daimons	Ethics
Psyches	
3) *Sensibles*:	
Humans	Physics
Bodies	

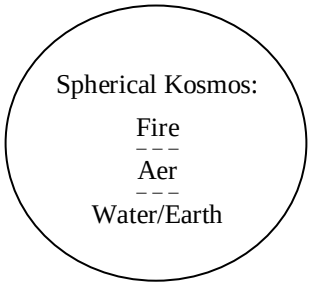
Whether Xenocrátes actually viewed his three branches of philosophy this way is admittedly uncertain. We can be fairly sure, however, that his system of three realms was structured as shown above, in which the Sensibles are obviously connected (via the Greek word for 'sensible': 'aisthetikos') with our idea of Aesthetic Value. Nor would it be too surprising if the Intelligibles were connected with Logic (as shown above), whose power allows our Minds to understand the Gods (not to mention the Platonic Forms, which inhabit the outermost realm). At the same time, Logic, as was well-known to Xenocrátes', deals with Truth and Falsity, and this would seem to connect it with the realm of Opinion. In this case Ethics would be connected with the Intelligible realm (in contrast to what is given above), and would reflect the nature of the divine beings. In either case, however, it seems fairly evident that Xenocrátes' three branches of philosophy reflect the structure of the axiological system we developed above, with his Physics corresponding to our physiological Aesthetic Values, his Logic to our mental Logical Values, and his Ethics to our Ethical Values. At the very beginning of the history of philosophy, then, we find a system of values similar to that which we were able to derive, here, from the biological imperatives.

As we see then from our analysis of Xenocrátes' philosophical system, Science has been the stimulus for Philosophy from almost the very beginning. In fact, the very first Greek philosophers—Xenophánes of Colophon and Pythagóras of Samos—borrowed from the ideas of the earliest Greek scientists in formulating their respective philosophical opinions. Now admittedly, this classification of Xenophánes and Pythagóras as "the very first Greek philosopher" flies in the face of philosophic tradition, according to which the first Greek philosophers were Tháles, Anaxímandros, and Anaximénes. These three Greek thinkers, however, who are typically cited as the earliest of the Ionians philosophers, were in actuality not philosophers at all, and they were certainly not called philosophers. Rather, these three men were called "physiologoi"—what we today would call "physicists"—and they were in fact the West's first *scientists*, having developed and formulated the sciences of Astronomy and Cosmology in order to help them understand the natural Cosmos (as it came to be called). A brief summary of their most significant accomplishments, all of which can readily be seen to be scientific rather than philosophical, will make this clear.

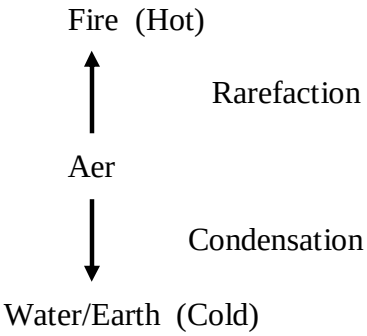
A Summary of The Milesian Physiologoi and the Origins of Science:

Tháles of Miletos (f 594 BCE): Unity in Multiplicity
- Origin/Ground: Water, which is alive/mental [conscious] (Hylozoism/Hylopsychism)
- Source of Change: Psyche & Gods: Water stays the same but b/c other things by Aggregation
- Earth is a flat Disc floating on Water; predicted Eclipse of 5-28-585 BCE; diverted the Halys R.
- 1st Greek Geometrician/Astronomer, used Geo. to calc. height & distance (of pyramids, ships)
- Recognized the superiority of General Principles over Specific Cases: Induction

Anaxímandros of Miletos (f 580 BCE): Antithesis (Opposition); Spherical Cosmos
Origin/Ground: 'To Apeiron' = 'The Unbound" ['un-cleaved' (≈ 'Chaos')], and the Seed
Change: Vortex & Separation => Water, Earth, Air, Fire; Natural Law: Math
Opposites: Heat & Cold [Flame/Fire & Mist/Air (per TPP120)], contained in the Seed
1st to clearly state the concept of opposed natural substances (per TPP119)
Earth a Cylinder floating in Space; the Sun a Fire-Filled Ring w/ an Aperture; Oblique Ecliptic
Empirical observations of Solar events (e.g. Solstices/Equinoxes) using a gnomon (i.e., equip.)
The World is constantly rotating (the Vortex); earliest *evolutionary* view of Human origins;



Anaximénes of Miletos (f 555 BCE): The Arché ('Origin')
Arché: Aer [= vaporous, *atmo*-spheric air]
Change: Opposition (Hot & Cold), Ceaseless rhythmic Creation/Destruction ≈ Respiration
Opposites: Condensation & Rarefaction (Puknosis & Manosis)
Earth: Flat; Sun: Flat Disc of Fire; Stars nailed to Rotating Sphere, Planets are free-floating



We recognize the work of these Ionian Physiologoi as Science, even though they were fairly naïve about what we today take to be the actual situation in physical reality. Apparently, even the naïve and primitive state of their Science could not impede the rise of some fairly acute philosophical questions. And within a generation after these men another group of men, the earliest *true* philosophers—men like aforementioned Xenophánes and Pythagóras, as well as Heráкleitos, and Parmenídes—gave birth to Greek philosophy, which almost immediately embraced the three-fold division that were here derived from the biological imperatives. And even today, some twenty three hundred years later, the divisions or branches of philosophy developed by Xenocrátes still attract the interest of philosophers. A recent version was proposed

by the American philosopher Charles Sanders Peirce in 1903, and it included a division of Philosophy into three branches (though not Xenocrátes' three): Phenomenology, Normative Science, and Metaphysics. Nevertheless, Peirce's Normative Science was itself divided (by Peirce himself) into—you guessed it—the three values of our axiological system: Aesthetics, Logic, and Ethics.[17] And even now something like Peirce's Normative Sciences can be found lurking in the background of many a college or university curriculum. For often enough these academic institutions include not only a class entitled Introduction to Philosophy, but such classes as an Introductions to Aesthetics, Introduction to Logic, and Introduction to Ethics. The axiological system elucidated here has thus been vindicated in several ways from classical times to the present day.

Before closing this introductory chapter, we must note yet one more vindication of the three-fold division of Philosophy into Aesthetics, Logic, and Ethics (as if we need any more proof). Admittedly, at this point we may be accused of beating a dead horse, for have we not established our point already? Nevertheless, this last piece of evidence in the justification of the structure of Western Philosophy is the most telling of all, given that it derives from the human brain itself.

Beginning, then, with the human cognitive apparatus in general—the human nervous system—we find that our nervous system can be divided quite naturally into several constituent sub-systems. Of these subsystems, the most relevant for our purposes are the brain itself and the sense organs. And in fact, since the really interesting parts of the sense organs are the endpoints of each of these in the brain, where our sensations are "perceived", we will limit ourselves to the brain itself (assuming that most of us are already familiar with the five senses). Now, perhaps the most useful way of describing the brain (which is shown schematically in Figure 1-2, below) is by means of Paul D. MacLean's model of the *triune* (or three-in-one) *brain*.[18] In this three-layered model, then, the lowest, earliest, and most primitive layer of our brain consists in a remnant of the brain of the earliest land animals—the reptiles. Known, accordingly, as the Reptilian Complex, this part of our brains consists of the brainstem and the cerebellum, the functions of which are our physical well-being and our needs and drives—in other words, our basic biological requirements. At the next level, in both historical and organizational development, we find what MacLean calls the Mammalian Complex, of which the limbic system is, for us, the defining component. The limbic system is the seat and origin of emotions in all mammals, and it allows for such behavior as "altruism", so critical in the care of mammalian parents for their offspring. But only the "highest" among mammals (and in fact the highest Primates) are capable of experiencing emotions "consciously"; for only these higher Primates possess a third system, the system that is responsible for conscious in any form whatsoever. This is the system that MacLean calls the Human Complex, and it allows humans to be conscious of not only emotions, but of much more as well. In the origins of this complex, when humans were first evolving, the outer layer of the upper part of the brain—called the neocortex—underwent an evolutionary expansion that allowed the earliest cognitively-advanced mammals—the Australopithecines—to approach advanced consciousness. And although the complete triune brain, in its primitive form, developed some ten million years ago (well before there were any

humans on the planet), at about three million years ago, with the first appearance of humans (or at least the genus Homo), the neocortex experienced a period of enormous and unprecedented expansion. Rapidly growing some forty percent larger than it had been, this enlarged neocortex allowed for the development of the Human Complex. And as a result, the two earlier complexes, which involve (as suggested above) our needs and drives (centered in the Reptilian Complex) and our emotions (centered in the Mammalian Complex or Limbic System), came to be dominated by our ability to reason and be conscious (centered in the Human Complex).

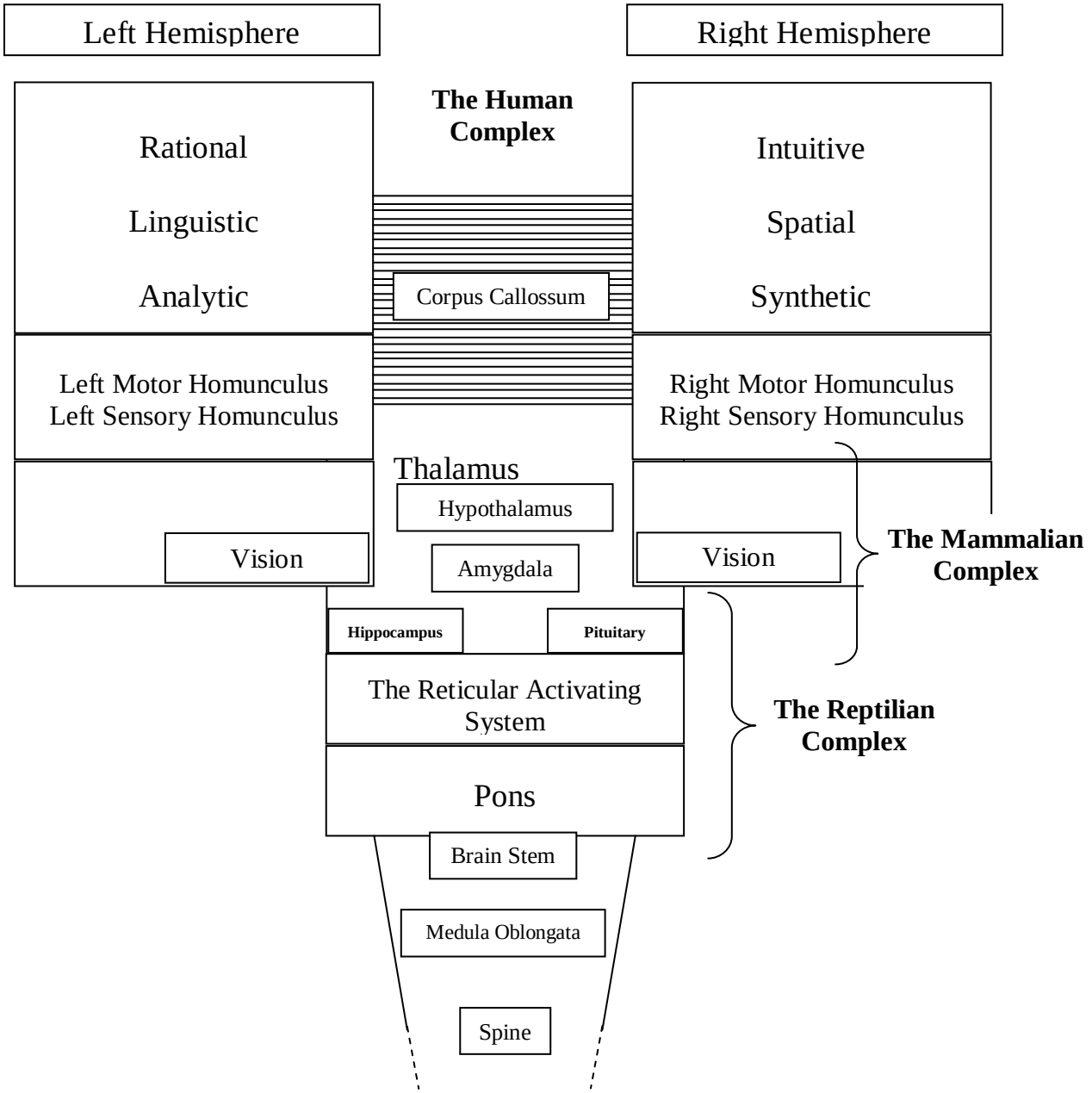


Figure 1-2. The Triune Structure of the Human Brain

The philosophical significance of these three complexes, or at least the human capacities they provide—motivation, emotion, and intelligence—are undoubtedly reflected in Xenocrátes' philosophical system of Physics, Aesthetics, and Logic. At the same time, the affect of these systems on philosophical reasoning dates back much farther than Xenocrátes, as we have seen already. What we have not seen, however, is that eh very first true world-class philosopher, Pythagóras of Samos, seems to have intuitively perceived these three complexes, for he purportedly compared differences in human nature to the three kinds of people who gather at public spectacles. At these affairs, he said, we find people who "are influenced by the desire of riches and luxury; others by the love of power and dominion . . . . But the purest and most genuine character is that of the man who devotes himself to the contemplation of the most beautiful things . . . ." Of these several characteristics, "power and dominion" are directly connected with the capacities of the earliest complex of the triune brain—the Reptilian Complex, which includes such behavior as the establishment of a "leader" who then dominates home-territory; next, "the desire of . . . luxury" is connected with the functions of the Limbic System, the second complex, for its focus is the pleasure brought by luxury. And finally, "contemplation," which is a function of intelligence and belongs, according to Pythagóras, to the person who "may properly be called a *philosopher*", would not even be possible without our rational capacity, produced by the now greatly-enlarged pre-frontal cortex.[19] Pythagóras' three kinds of spectators thus parallel the functions of the three layers of the triune brain; and later philosophers—in particular, Plato and his successors at the Academy in Athens (as we saw with Xenocrátes)—recognized the significance of Pythagóras' triadic division. In the *Republic*, for instance (among other works), Plato connects these three Pythagórean personality-types and their respective capacities with his three types of citizens of his ideal state: Drives for his Craftsmen; Emotions for his Auxiliary-Guardians; and Reason for his Ruler-Guardians or Philosopher-Kings. And as we saw above, Plato's second successor, Xenocrátes, may be said to have incorporated the Pythagórean triad into his (Xenocrátes') triadic division consisting of the Body (Desire), the Soul (Emotions), and the Mind (Reason). As a result, Xenocrátes' three branches of philosophy align with his three divisions of a human being (Body, Soul, and Mind), as given earlier, and the structure of the triune brain must also be acknowledged as underlying Xenocrátes three branches of philosophy itself. Underlying Physics, we have the Reptilian Complex, which governs our physical needs; underlying Ethics, the Mammalian Complex, which allows for Emotion; and underlying Logic, we find the Human Complex. Given these correlations, it would also naturally follow that even the Axiology derived above from the four biological imperatives—with its Aesthetic Value, Ethical Value, and Logical Value—finds its source and origin in the triune structure of the human brain. Nor in this context should we fail to recall Peirce's Normative Science—with its Aesthetics, Ethics, and Logic, not to mention the standard faire of most collegiate Philosophy Departments: Introduction to Aesthetic, Introduction to Logic, and Introduction to Ethics.

References

[1] FGEM, Chapters 5-7.
[2] See, for instance, Paul Radin's *Primitive Man as Philosopher* (PMP).
[3] TGB, 48-50.
[4] Both of these quotes are from TN, 312 and 313.
[5] PIR, 88; the italics are mine.
[6] Figure 1-1 actually gives three categories, listed along the left margin of the table, but the third category is only a combination of the *two main categories*.
[7] This and the following quotations are taken from STB, Chapter Four.
[8] STB, 137.
[9] STB, 139.
[10] STB, 133.
[11] This list, and the two quotes given in this paragraph can be found at STB, 130.
[12] TNS, 129 and 130.
[13] TNS, 129-31.
[14] THN, I.19.
[15] NEB, 2.804.
[16] All of the information given here on Xenocrátes comes from NEB, X.278-9.
[17] TEP, 1.xxx-xxxi.
[18] TDE, 60-79.
[19] The quotes given here from Pythagóras come from Iamblichus' *The Life of Pythagóras*, quoted in PSL, 30.