Life and death, generation and corruption are obviously universal experiences of mankind. Man had to deal with these phenomena and search for psychological accommodation to the objective facts. Man, however, has tremendous capacity for imagination and wonder -- so it is easy to let our imagination err in the gray zone, especially when it seeks to satisfy our deepest desires. Thus the notions of the soul as well as of God have mythological origins (1) and the fact that they survived in religions which are professed in the 20th century does not make them less mythical in the least.

RELIGIOUS CONCEPTS OF THE SOUL

Upanishads

In the Upanishads there is an idea of the descent of individual souls into the bodies which is an act of individualization of the Absolute, the One, the Brahman. The sages may achieve a state of mind when they learn that the individual soul is in reality one, the soul of the universe. Thus by contemplation one may realize that there is no diversity and multiplicity, only unity. Just like rivers which, when reaching the ocean lose their identity, so the sage when liberated from all earthly attachments approaching the divine Being, becomes Brahman.(2)
Orphism

The same idea of the original ontological divinity of the soul is found in the new religion that became popular in the 6th century B.C.E. in Greece among the Orphic communities. Humans, according to their legends, were descendants from the bodies of Titans; the enemies of Zeus, who were killed by Zeus in retaliation for killing Dionysos. So humans contain in their nature the element of Titans - the evil, and the element of Dionysos - the good. The echo of this story survived in Genesis (6.5). Thus the soul is imprisoned in the human body and it has to be freed from it. But death is not liberation since the soul will go through a series of reincarnations -- the ultimate liberation is available only through the initiation into Orphic mysteries and asceticism.(3)

Pythagoras

Pythagoras (b. ca 590 B.C.E.) founded a religious society, the prominent characteristic of which was the doctrine of the migration of souls. Just as the evil angels in the Bible, so the human soul was cast out from heaven and punished by being imprisoned in the human body. The soul is understood as the "substance" and its immortal energy, not as the personality of the individual. After death it remains for some time in the Hades and then returns back to the world filling the air. It repeats the cycle of reincarnation in humans or in animals remembering its past.(4) Similar doctrines were propounded by Empedocles of Agrigentum (Acragas) in Sicily (ca 495-435 B.C.E.).(5)

Plato

The greatest influence on the religious thought in Christianity was undoubtedly Plato (429-347 B.C.E.) and his followers. In Plato, the soul and the body are two different realities. The soul is divine by nature. It is eternal and immortal, but its association with the body is regarded as its fall from heaven. It has to be purified and if the purification is not sufficient, it has to undergo a cycle of reincarnations. The body is impure, it is something inferior to the soul. Accordingly, the sensual or experimental cognition is inferior to the one based only on the speculative, intellectual exercise of the mind. There is also another trend in Plato's writings in which he emphasized that the soul was sent by God to the world to link it with the world of ideas.(6)

Hebrew and Biblical Doctrine

The fundamental Hebrew doctrine is based on the assertion that eternal life is guaranteed by the bodily resurrection upon the condition of obedience to the word of God.(7) According to the biblical assertion, "the dead are truly dead in 'gravedom' and are sleeping until the coming of Christ, when he will awaken them."(8) The source of the biblical doctrines are the ancient Babylonian and Egyptian religious assertions, often quite elaborate, assuming the presence of immediate life after death in a form of some unspecified entities -- they were limited in space, had a substance and independent existence from the body.(9) These doctrines go back as far as 6-7 thousand years B.C.E. and survived in the biblical texts. In Egypt they were basis for religious rituals well into the Christian era. We find such a doctrine in the Homeric tradition of the shadows banished from the body at death and wandering in the underworld, the Hades.(10)

The Greeks were the first to postulate the "immortal soul" (psuche) in Orphic and Pythagorean tradition. In its Platonic version it was identified with the mind. The Platonic version of an entity "imprisoned in the body" was adopted by Roman Catholic and later by Protestant Christianity. The corollary to this idea was the doctrine of eternal damnation of nonbelievers, malefactors etc. who were to suffer physically in a place delimited by space, called in Latin infernum, in English hell and visualized like Greek region of shadows Hades. The souls, though supposedly immaterial and immortal, individually differentiated and limited in space are to suffer physically after death in hell or enjoy some physical bliss in heaven (again in a limited specific physical place) in the presence of the Trinity, in fact three persons of God, differentiated and separate.

In a common religious concept of the soul it is defined as a static, vague entity supposedly consisting of the consciousness or personality, able to exist separately from the living body, limited in space, having an immaterial substance, the existence of which is tacitly assumed, and being a carrier of certain functional attributes of human personality: emotions and feelings, sensations, intellect. It is also considered to be an entity
that gives life to the inert, lifeless body. Such a traditional concept does not consider a human being or any other animal or plant as a functional, dynamic form of existence of matter. The representation of the living body is similar to an amorphous, structureless, motionless solid figure -- just like Geppetto's wooden puppet - shaped by God but animated by his "breath."

And here we come to the origin of the whole concept. The Hebrew, biblical term for all living organisms is "nephsh" (Gen. 1:21; Lev. 11:46; Gen. 2:7), though it is often translated by the term soul but it means a living organism and by extension, a life-giving principle, the whole personality in humans. Thus the Hebrew usage of the term technically means a "vital force" animating the living creatures, men and beasts that was imparted by the God's breath, "ruach." (Gen. 2:7; Ecclesiastes 3:19). It does not seem to have the divine nature, is not immortal, and does not seem to have a divine origin. The Hebrew tradition does not know the concept of the fall of the soul.

Similarly there is no term in Hebrew for the body. The term which is usually translated as the body is basar, "saxr" in Greek and in Latin caro. But basar means a whole man, the whole living being, human or animal, the body and the soul as one psychosomatic entity. In Aristotle it corresponds to the living body or syntheton. In Hebrew tradition, the functions or sensations which are ascribed in the dualistic tradition to the body, are ascribed to the nephesh. In turn, the functions and sensations, that in the dualistic tradition are ascribed to the soul, in the Hebrew tradition are ascribed to the organs of the body. Thus there is a close affinity between the Aristotelian tradition and the Hebrew tradition.

The Hebrew term "ruach" is often translated by the term spirit, Latin spiritus, or the Greek pneuma. The Greek term too, etymologically means breath, breathing, as it was easy to associate the action of breathing with the regeneration or maintaining of life by the divine element contained in the surrounding air, some sort of "spiritual" substance. There is no separate Hebrew term for the air. But this term has a new supernatural dimension as a principle by which we are able to receive what God communicates to us, and in general to communicate with God.

The Hebrew concept of death is associated with the cessation of nephesh to exist -- it is spoken of figuratively as going to the grave "sheol" from which God will redeem it (Psalm 16:10; 49:15). So in the Hebrew, biblical tradition there is no dualistic, Orphic concept of man as a separate substance, the body and a separate substance, the soul -- rather one single entity.

In the Platonic tradition, the Greeks considered the body to be inferior to the soul, especially its intellectual faculty, and thus held it in contempt. Once the soul was released from the body, it became free and could fly to the higher realm of the consciousness. So there was no need for the bodily resurrection, and in such a context the idea of the bodily resurrection preserved in the orthodox Christianity, becomes a superfluous and awkward assertion. The importation of the Neoplatonic doctrine of the soul was probably done by Athenagoras of Alexandria (127-190 C.E.), a Greek Neoplatonic philosopher converted to Christianity. Other Church Fathers -- Tertullian (160-240), Augustine (354-430) -- followed his footsteps. Augustine, before he became Christian, listed 16 reasons for the immortality of the soul based on Platonic thought. The orthodox Catholic and Protestant ecclesiastical doctrine of the soul found its full expression in speculations of Thomas Aquinas, who accepted the Aristotelian concept of the soul in animals and in plants, but the Platonic concept, augmented by biblical mythology in man.(11)

But in the early days of the Church the dominant theory was the doctrine of conditional immortality, which meant that no one will live forever, unless Jesus Christ one day gives him eternal life. This was the doctrine of the Scripture represented by Lactantius (ca 250-330) that disappeared between the 4th and the 6th centuries. It was revived during the Reformation movement when some theologians attempted to return to the Bible as the source of their doctrines. The doctrine of conditional immortality was revived by Martin Luther, William Tyndale and some Anabaptists. It is especially important to mention here Michael Servetus as the one who gave the most complete theoretical formulations for such an orientation. He integrated the physiological knowledge available to him and the biblical assertions about the soul in one system.(12) From him the doctrine was developed further by Socinian tradition (13) and survived in some Christian churches with biblical unitarian orientation.

A strong proponent of the Platonic doctrine was John Calvin. According to Calvin, the body weights down the soul and confines it to an earthly habitation, limiting its perception. Once the soul is free from its prison "it
consents to the will of God and is no longer subject to the tyranny of the flesh; thus dwelling in tranquility with all its thoughts fixed on God."

Norton Raxworth explained why the Greek doctrine was accepted in the Church and the Hebrew biblical doctrine of the resurrection was neglected: "Why has this glorious and practical truth of the resurrection become so diffused and neglected in the Church today? The reasons for this situation go back into history. In the 3rd century, Christian apologists sought to defend Christianity within the framework of Greek philosophy. Origen (d. 254) for example freely adopted Platonic thought as a means of explaining Christian doctrine. To the Jews it was argued that Christ was the fulfillment of prophecy and a Christian understanding of the Hebrew scriptures was developed. To the Greeks, however, the argument was that Christianity was not only consonant with Greek philosophy, but the culmination of it. Thus the Hellenists were able to accept a Christianity that taught soul-survival as the hope of the believer rather than resurrection (an idea repugnant to much of Greek thought). So Paul was reconciled to Plato. As a modern scholar comments: 'Not surprisingly the Greek view of the soul had infected the early Church, whose catch-phrase was "soma-sema" (the body a tomb). To their minds the soul was released from its prison at death."(14)

ARISTOTLE

Preliminary

The psychology of Aristotle is the first coherent study of the life-giving principle or of life itself based on biological phenomena explained in empirical, physiological terms. It is more profound and more consequential than any previous account. Aristotle's study includes primarily De anima and two other scientific works -- De partibus animalium and De generatione animalium. Some differentiate three stages in the evolution of the Aristotelian conception (15):

1. In Eudemus, an early dialogue written ca 354 B.C.E. in the purely Orphic and Platonic spirit, some 20 years after Plato's Phaedo, Aristotle accepts the Platonic concept of the temporary imprisonment of the immortal substance. It enjoys its true life only before birth and after death;(16) 2. In the biological works Aristotle considers the soul as an immaterial substance constituting with the body a living organism, it utilizes the body and is located in specific parts e.g. in the heart; 3. De anima (Peri Psuches) (17) is a full empirical exposition of the Aristotelian concept in line with his philosophy of universal ontological principles of form and matter. Aristotle uses the term, the soul, but it has a different meaning than in previous accounts: The soul now being the form or actuality of the living body, the body itself being the matter or potentiality. Aristotle completely rejected the mythical thinking of his precursors about the original divinity of the soul, its preexistence, immortality and the imprisonment in the body.

Aristotle attributed primary importance to the study of the soul -- it contributed to the knowledge of the truth and in general to the knowledge of nature. Soul, psyche, is the principle (arche) of living beings. Aristotle first delineates the methodological rules and procedural approach to the study. We have to grasp the nature, essence and properties of affections, some of which are proper to the soul and some are proper to the animal. This study is as difficult as to learn about the essence and form of things. Then one has to determine the genre to which the soul belongs and what it is. What is a substance, its category: whether it is a potential thing or it is a certain act (complete reality, fullness). Whether it is divisible or it is indivisible, or they are the same species or they differ generically, or specifically. One should not ignore the other souls e.g. animal's or God's. Whether there are many souls or many parts of the same soul, so one has to examine the parts and their functions (activity) e.g. intellection or intellect, sensation or the faculty of sensation (sensitive faculty).

There is no state or condition of the soul that could be affected without the body, though it seems to be such a function -- the intellection. Nevertheless, there is among the functions or affections none that could exist without the body. It is clear that the states of the soul are the forms (logos) realized in matter. The notion (logos) is the form (to eidos) of the thing (pragma), but to be the form it has to be realized in the matter (hule). Thus, properties or functions are inseparable from the bodies. If they are separated -- this is done only by abstraction. So the states of the soul cannot be regarded as separable from the physical atter.

Review of Old Theories
Aristotle's intellectual ancestors differentiated all objects into two classes: the inanimate objects and the animate objects. The main characteristic of the animate objects is the possession of ability to move and sensation.

The soul, according to such a view, was the motor because what is not in motion cannot move other things and was made of fire and heat. The body was made of a mixture of elements or principles called variously rhizomata (Empedocles differentiated 4 such elements), archai by Thales, or since Plato stoicheia. Leucippus considered the soul as made of spherical atoms, Pythagoreans maintained that the soul was in the air. The soul was in motion by itself. Anaxagoras held that the intellect nous is the driving motor. Also the intellect, is the cause of what is good and beautiful in the superior and inferior animals. Intellect is the principle of the totality of things, pure and simple, it moves the universe. Thus the soul is the most movable, it knows things, and has at least one principle.

Plato probably gave the most detailed description of the soul: it is constituted of the elements, the animal is a result of the idea of the One, of the First Idea. The principles are in quantity and in quality, some are corporeal, some are incorporeal.

According to Democritus the soul and the intellect are the same thing, it is formed of the indivisible primary elements, spherical since they are most movable and of fire.

Diogenes claimed that the soul is the air, most subtle, leptotaton, from all other bodies, made of the smallest particles, and for that reason it knows and moves.

Heraclitus claimed the soul to consist of hot vapor, the most incorporeal, asomatotaton.

Alcmaeon claimed that it is immortal, moves always and is the whole firmament.

Thus according to Aristotle various authors considered the souls made of one or of several elements: fire, water, blood, air, except the earth. They did not clearly perceive that the soul of an individual living thing is a unity, though possessed of parts or faculties which do not have independent existence. All these definitions have three things in common: Movement, Sensation, Incorporeality or the least possible corporeality. If we consider that the soul knows all things and follow the rule that the like knows the like, then the soul must be composed of all things. Only Anaxagoras maintained that the intellect nous is impassible (apathes) and has nothing to do with other things. But how it can know and by what cause -- no clear answer was given to this.

Aristotle tries to explain the origin of the term life and soul. If the soul were considered to be made of principles e.g. heat, then the term (zen) was created, if of the cold -- then it is involved in the respiration (anapnoi) and cooling (katapsyxis) and hence the term psyche was created.

Further analysis by Aristotle causes him to discard movement as the essence of the soul. It cannot be a harmony or a mixture of contraries either, because then the souls would be in every organ.

If it is intellect, then it is something more divine and impassible; in animals it is the motor. Three characteristics are fundamental for the definition of the soul: the substance most mobile; most subtle, and most incorporeal; composed of elements. These would apply to the soul if it were a body, but the soul knows and senses the elements of things by proportion and assemblage. Then it seems that there are no common elements in the soul with other objects. Therefore, the opinion about the composition of the soul is not valid. Also the Orphic opinion about the soul, as introduced from the outside during respiration by the flow of air, is not valid either since it is not possible in plants. Thales said that all things are full of God -- the air inspired is homogenous, but the soul is not of the same nature. The soul is responsible for our recognition, sensation, opinion and desire, but also for locomotion, growth, maturation, nourishment -- life as such belongs to the soul. Some divide the soul into parts with different activities but when it separates from the body, it is according to them, one unity. Parts of plants or of animals may survive. Thus the soul must be every part of the body and in every part, all parts of the soul are contained. Thus, is the soul divisible?

**Definition of the soul**
Aristotle next comes to the definition of the soul. To understand it one has to grasp how Aristotle visualized all beings. He differentiated all kinds of beings into three categories of substances (ousia):

1. in a sense of non determined matter (hule);
2. as essence or form (eidos), due to which an object is the-what-it-is (to te estin);
3. as an assembly made by one and the other (amfoin).

Moreover, matter was characterized by the possibility, potentiality (dunamis) and the essence, form is realization, actualization or the act (entelecheia). Form in turn can be understood in two meanings:

as knowledge or cognition as contemplation of acts
episteme to theroin

Natural bodies in turn seem to be more properly substances constituted of principles:

physical bodies (natural)
**ta somata fusika**

possessing life (*zoen*)

with many characteristics

The expression "we live and feel" has two meanings: one is by what we know -- knowledge of one by the other; the second meaning is by what we are healthy -- i.e. by part or by the whole of the body. The knowledge of health is the form/essence, the notion. The soul is primarily this by which we are alive, we think and we feel. Hence, the soul is a notion and a form and not matter.

It is not possible to have a notion of a common soul -- as by analogy there is one notion of the geometrical figure. Soul is not a concept determined outside of diverse souls. As for figures, we have one concept of the figure, but it would not correspond to any of the particular figure. By analogy of figures with the human beings we can say that the anterior is always contained in the potentiality: so as the triangle is contained in the square, so the nutritive soul is contained in the sensitive. Next, what is the soul of each of the three categories of the living things: plants, animals, humans? The reason for this hierarchy is that without nutritive soul there is no sensitive soul, without tactile sensitivity no other sensitivity is possible and so on.

Living being syntheton, empsychon is a substance composed of matter and a form. The body is not the soul and does not have all the attributes of a subject, but plays a role of the subject, is substratum, matter.

First definition: The soul as a substance is the form (sometimes called ousia, sometimes logos) or actualization of natural bodies that have life in potentiality. (18) Only the essence eidos is the formal act. But there are different stages of actuality e.g. a man has life even though he is asleep. Thus the soul is an act entelecheia of the natural body in the sense of knowledge or cognition and contemplation as in a sleep hypnos and in the wake egrigorsis:

---

**sleep (hupnos)**

**wake (egrigorsis)**

---

analogous to possessing knowledge but is not thinking actually; is anterior to action

(energein)

analogous to

contemplation

---
Second definition: The soul is thus the lowest, first stage of actualization of the body that potentially has life. (19) The actual precedes the potential chronologically and logically. The member of the species must exist before it can reproduce itself. But for the entire species the actuality of life is prior [even in time] to matter. With the universe the temporal priority does not arise since it depends on the Primary Mover, pure act (energeia) and life itself. The body is something that is organized -- even plants have parts analogous to organs.

Thus the third definition: Common to every type of the soul is the first act of the natural organized body.(20) The soul and the body are not the same thing, neither is the wax and an imprint in it. Chiefly it is an act entelecheia. Thus the soul is the substance of the living body as a form giving it the characteristics of what it is - - quiddity. For example for an axe, its quiddity would be its soul. The axe exists because the form of the axe is not the natural body. The soul is the quiddity of a living body that has the principle of movement and all the rest characteristics for life. "If the eye were an animal, its vision would be its soul." Thus vision is the formal essence of the eye and the eye is the matter of vision.(21)

What is true of the parts one has to apply to the whole of the living body. Sensitivity is of the whole sensitive body as a possibility of what is capable of living that is of what has a soul e.g. of a seed or a fruit. The state of being awake is an act as the cutting and vision. The soul is like vision and the property of a tool. What is alive is the soul and the body. If the soul is divisible it is not separable from the body, or at least from certain parts of the body. Act of the parts of the soul is an act of the parts of the body. But it is characteristic that Aristotle says that we do not know if the soul is the act of the body as the pilot is that of the ship.

The living being is thus an assemblage of the matter and of form, and the body is not the actuality of the soul but the soul is actuality of the species of the living body. Hence the soul cannot exist without the body, nor can it be a body. The doctrine of the soul as a form or entelechy of the body is denying the immortality of the soul. Soul is not the body, yet it is something of the body that resides in the body -- in such a body and it cannot use the other receptacle. The same conclusion is obtained by the analysis of actuality and potentiality: the actuality of every object ought to be naturally produced in what this thing is in potentiality and in the proper matter -- it is entelecheia. The soul is a certain actualization and the essential form of that what possesses a potentiality to be what it is (in act). In a more general function the soul acts as a vital principle in animal life through a corporeal medium that Aristotle calls connate spirit (sumphuton pneuma) or vital heat (sumphuton thermon), located in the heart but also in the semen as a fertilizing element.

**Faculties of the soul**

The living being differs from the nonliving, and life signifies the following characteristics: intellect, sensation, movement or rest in space. But the movement has a broader meaning -- it also means change, growth and decay. The living organisms have faculty and principle. Life belongs to the living by inheritance of this principle. But what originally constitutes an animal is the ability of sensation, the touch, growth and decay. The soul is the principle of various kinds of life that is defined by various faculties: nutritive and reproductive (threptikon kai gennetikon); appetitive (orektikton): desire, courage, reasoned wish; sensitive (aisthetikon); mobile (in space) (kinetikon kata topon); dianoetic (discursive thinking) (dianoetikon). Plants have only the nutritive faculty; all animals have at least touch for sensitivity; humans and all other who might resemble man have dianoetic faculty and intellect.

Each one of these faculties is a soul or part of the soul and if part, it is not separable logically or in place. The plants once divided continue to live, so the soul is one for each plant in act, but many in possibility. The same applies to the articulate animals -- each part has its own sensitivity, also by necessity the desire, pleasure, pain. Only with respect to the intellectual kind of soul -- Aristotle seems to have some reservation: it is the only kind that could be separated as eternal from the perishable; it is peculiar to the man and perhaps a link with the divine; other parts of the soul are not separable from each other but they are different. It seems that Aristotle has not yet thought completely through the problem or the reported text is not a complete exposé of his thoughts.

Every living thing must possess the nutritive soul and it includes also the ability to reproduce. Plants and embryos at early stages have no more; they absorb nutriment without sensation. Next is sensation, implying the ability to feel pleasure and pain and with it goes the appetency. Some animals possess all sensations, some only certain of them, others only one. And this is what differentiates animals. Among sensations, the primary is touch (afe), (including taste -- chumos) i.e. it can exist without others, but others cannot exist without it. It is
necessary for the recognition of food.

The soul as the first principle is responsible for the locomotion and other types of movement: growth, alteration, decay, sensation of space, nutrition which is growth in essence and form. Nutrition is an act of accretion of the contraries that conserves essence which, exists as long as the nutrition does. Three elements are involved in nutrition: the body to be nourished, that with which it is to be nourished and that which nourishes -- the primordial soul. The end of the nourishment is to reproduce a similar being -- thus, this type of soul will be generative soul.

The smallest number of living organisms have reasoning (logismos) and thought (dianoia) -- intelligence, purpose, discursive thinking -- and have all other faculties. Each of these faculties has to be treated differently, but the case of the theoretical intellect or mind is different. We find that for each of these functions we find a more general one.

The special function of the soul is "imagination" fantasía. The imagination is different from the thought and sensation, but it does not exist without sensation. It is a basis for believing, intellectual operations. Imagination is in our power when we want it, it is possible to imagine an object through the eyes of the soul. Aristotle uses the term fantasía for visualization, retention or recovery of the past sensation, something that could be called ideation as the occurrence of perception without the corresponding external stimulation.(22) Fantasía occurs at two levels -- the sensitive and the deliberative or rational, since animals have the power to recall which is a prerequisite to desire without sharing the human faculty of reason.

The scale of life

Nature is organized in a hierarchy of beings starting with the inanimate objects. Aristotle developed a scale of living beings which anticipated the evolutionary scale.

Aristotle's scale of life

<table>
<thead>
<tr>
<th>Plants and animals</th>
<th>Animals</th>
</tr>
</thead>
<tbody>
<tr>
<td>nutritive +</td>
<td>Sensitive</td>
</tr>
<tr>
<td>reproductive</td>
<td>touch + taste</td>
</tr>
<tr>
<td></td>
<td>Rational</td>
</tr>
<tr>
<td>+ sight + hearing + smell</td>
<td>practical + theoretical reasoning</td>
</tr>
<tr>
<td></td>
<td>+ calculus + intellectual intuition</td>
</tr>
<tr>
<td></td>
<td>nous</td>
</tr>
<tr>
<td></td>
<td>appetitive</td>
</tr>
<tr>
<td></td>
<td>physical desire + courage + rational will</td>
</tr>
<tr>
<td></td>
<td>(epithemia thumos boulesis)</td>
</tr>
<tr>
<td></td>
<td>imaginative</td>
</tr>
</tbody>
</table>
But Aristotle never expressed the idea of temporal evolution. His hierarchy was static, inspired by the conviction of permanency of forms and their priority to matter. This concept again fits into the Aristotelian scheme of act and potentiality, form and matter. Aristotle was removed from the idea of evolution -- the cosmic structure, the species and genus were fixed from eternity. Though individuals do not live for ever, they share a collective immortality.

Thus also for beings whose generation is not spontaneous the most natural function is to realize another similar being - e.g. animal for an animal, a plant for a plant -- through this they all participate in the eternal and divine. For a being the end is the eternal, the divine though it is not individually. So the soul as the cause and the principle of the living thing is determined in the three ways: principle of the end (aneka), a cause of an essential form of the body of animals and an actualization of the potentiality. It is a cause and essence. So the cause for being of all things is the essence. The soul for the living beings is their cause and principle, and as actualization is the form of potentiality. Thus the soul is the cause as the end -- the formal cause; the same is with the intellect -- it acts with the end (telos). As to the nature of the living things -- the soul is the end of the animals, natural bodies are the instruments of the soul.

Sensation and its objects

Sensations are a result of the whole living organism -- the soul and the body. They are the results of movement; the passions are as well results of a kind of alteration. But without exterior objects there would be no sensation. What can be sensed? The objects of sense, the sensibles, can be divided into three groups. 1. The sensible things which are proper to every sense. They are essentially perceptible i.e. they are specific or proper to each sense which is especially affected. E.g. color is a special object to the sight, sound to hearing, flavor to taste etc. Such objects cannot be perceived by other senses. Touch is a sense that is sensitive to several qualities. 2. The sensible things which are incidentally perceptible i.e. common to all senses e.g. motion, rest, number, shape, size. These are not proper to any of the specific senses. The sensible here is detected by accident because it is associated with another sensible. E.g. a motion is detected by touch and sight. Aristotle gives, as an example of an incidental sensible, the sight of a white object as "the son of Diaries." He is perceived incidentally as an accident of a white patch. Thus there are also objects of which we become aware through the senses -- but themselves they are incidentally objects of sensation as a whole of sensible qualities. In perceiving the special object of a particular sense we cannot be mistaken. But if we use the senses to perceive the phenomena detected by several senses (e.g. motion) or objects that are perceived only incidentally we may make errors.

Common Sensibles and Common Sense

Common sensibles, objects of a "common sense" or a sensation in common (koine aisthesis), affect the faculty of sensation as a whole not differentiated into five senses. Sensation is a unity in the same meaning as a soul -- it is numerically one but divisible in essence or form. The soul as a form or entelechy of the living body manifests itself through different organs so the sensation is manifested through different ways i.e. senses. In the detection of the common sensibles by a common sense there is a union of two things and this is the reason why the common sense may be mistaken. The common sensibles otherwise would not appear and would not be perceived. The common sense allows us clearly to perceive that every thing is another thing, since all things contain also other sensibles.

Is there then a special master organ for the faculty of common sensation? Though in the De anima Aristotle claims that there is no sense-organ for common sensibles, in other works he claims that there is one central faculty for all senses -- faculty of sensation so there is a single master sense organ.(23) It is to the sense as the whole animal body is to the soul. This master organ in the sanguineous animals is the heart, and also the source of animal life. The heart provides the innate natural heat which is necessary to life as a whole. According to ancient physiological concepts the heart was the central organ of digestion where the inner heat was generated,
related to the divine element ether, of which the heavenly bodies were made. Aristotle missed the brain as location of the mind. He associated the brain with the quality of "cold" which was contrary to "heat." The brain served, however, the "mind organ" -- the heart, in a way.

**How does sensation work?**

Using the universal ontological principle, Aristotle developed the theory of sensation. The essence of each sense is determined by relation to the sensible. E.g. what is visible, it is so because of the color which is allowed to pass through the transparent, the diafanes. The color is the actualization of the diafanes, whereas obscurity is the diafanes in potentiality. It is brought into the actualization by fire or something similar. Thus light is an immanence (parousia) of fire or something similar contrary to obscurity. Thus color moves diafanes. At the same time the sense-organ is moved by the air which is used as an intermediary in space to carry color, sound etc. (Democritus said that one could see the vacuum, however, Aristotle denied it). Aristotle asserts a need for an intermediary in space to carry color, the same is true for sound. Air seems to Aristotle to be a universal carrier, though the intermediary for odor is water. Touch according to Aristotle is the only sense that does not require an intermediary -- the body itself is an intermediary and the sense organ is a sort of membrane. Sensation thus is the power to receive sensible forms without matter e.g. color, sound, flavor etc. This power is possessed by the sense-organs: 

Thus, speaking generally, the sensation is the power which receives the sensible forms (aistheton eidos) without matter, just like wax that receives the imprint of a signet-ring without its iron or gold and receives the gold or bronze object, but without gold or ronze as such. Similarly the sensation specific for each sensible object is affected by the influence of color, flavor or sound, not because the individual object is that quality, but because it possesses that quality as its form. The sense-organ is primarily the device in which resides the faculty of sensation in general. This faculty and its organ are numerically one thing but their concept is different. Because what perceives must be corporeal but the quiddity of the sensitive and the sensation is the form and the power of the body. Hence it is clear why the excess of the intensity in the sensible objects will destroy the sense-organs. It is because if the motion in the sense-organ produced by an object is too strong, its form, logos, which is the sensation, will dissolve, as the tone and harmony are destroyed when the cords are struck with excessive force. Also one can see why plants do not have sensation though they possess one part of the soul and they are affected in some way by the influence of the tangibles, since they can be cooled or warmed up. The reason is in fact that they do not have the organ nor the principle capable of receiving forms of the sensibles, but they are affected by receiving the form together with the matter.(24).

Thus, what acts here are the bodies, the tangibles, in which the forms reside -- e.g the hot, the cold, the sound, the light, the obscurity, the odor act through the intermediary or directly. We sense fire through an intermediary, simple body, air or water which constitutes the sense-organ. All sense-organs are detected in animals that are not imperfect. As already indicated there is no special one sense-organ for the common sensibles. They are detected by accident. Aristotle, through his ontological concept, abolished earlier explanations of sensations which postulated intervention of material bodies. Empedocles believed e.g. that the sense-organs had pores of the right size to admit actual material particles. In Aristotle's concept, the sense-organs are informed in a material way about the quality they detect that is the physical alteration. But the sensation itself is a purely psychical event. The difference between e.g eye and sight is real, just as between body and soul. Also the plants lack sensation -- they are affected only when matter itself of an external object acts on them just as in the explanation given by Empedocles and the atomists for general sensation.

**The Philosophy of Sensation**

Sensation is a result of a movement or alteration in a material organ by an exterior objects of sense. But this result is a movement or alteration of the psyche. Its alteration cannot be material, so it means the reception of a form, an immaterial essence. Thus every sense-organ is a receptacle of the sensible without matter. What is detected are images (fantasmata) without the object being present. Thus the act of the sensible and of the sense is the same, but their concept (logos) is not the same. An example of this phenomenon can be given: The sound
in actualization or hearing in actualization, what has a potentiality of being heard passes to the actualization. What has potentiality of resounding passes to the actualization -- it resounds. The sound and hearing in actualization resides in the hearing in potentiality. Actualization is the active motor, it is not necessary for the motor to move -- hearing as sound designates one thing. The same is true with other sensations. Thus the action of the affection resides in one who is affected and not in the agent. Thus the actualization of the sensible and of the sensitive resides in the sensitive. The actualization of the sensible and of the sensitive has the specific name e.g. hearing, resonance, audition; the act of seeing opsis is called sight. The actualization of color is not named. The actualization of the sensible and of the sensitive are different concepts. It is necessary that they cease being at the same time. This necessity is not required for sense and the sensible in potentiality. This is why the ancients were not right. The object of the sensation is the sensible, it resides in the sensorium as such, it discerns among the different sensibles which is specific for it. But how do we differentiate the white and the sweet? Both are perceived by the same principle -- it perceives and pronounces the difference; it affirms that the sensibles are different. But this principle is indivisible and it perceives simultaneously different sensibles. And it is impossible for one thing to be contrary movements and to differentiate simultaneously indivisible and inseparable divided logically. Thus, in potentiality what discerns is the same and is indivisibly contraries, but is not logically. Only in the actualization it is divisible thus, it is not possible to be in actualization white and sweet at the same time in the way that it receives the forms of white and of sweet.

Aristotle’s use of the ontological doctrine of matter and form to sensation is an advance on the earlier speculations of Greek philosophers. Primarily, it is a criticism of the philosophers who thought they could describe the soul while ignoring the body. For him the potentiality of the sense-organ to receive the form in the act of sensation is the same statement as the potentiality of a seed to grow and become a flowering plant -- both are natural processes. Even today, we cannot say anything more beyond what Aristotle said about the function of the soul. W.A. Sinclair (25) describing the process of vision says that, when light-waves fall on the eye "they cause changes in the retina, and this in turn causes changes in the nerve behind the eye, which in turn causes changes in the brain, after which, in some way we do not understand, we have the experience we call seeing."

The Mind, Reason, Thought or Intellect

The term nous is used loosely meaning an intellectual intuition or all the operations of reason. Aristotle introduces mind in the third book of his treatise as that part of the soul which knows and thinks. He poses a problem from the outset whether intellection (to noein) resembles sensation (to aisthanesthai), that is, whether it is being acted upon by the objects of thought: "The intellect must be therefore impassible but receptive of the form potentially without actually being its object; intellect is to its object, just as sense is to sensation."(26) The notion of being acted upon has two meanings: It may mean the destruction of something by its contraries (as the destruction of the sense-organ by an excessive agent), or its development and progress from potency to act by its agency of the actual. So there is a significant analogy with sensation. Mind is potentially its object and it becomes actually when it thinks, i.e. it receives the intelligible form, the essence. The difference is, however, that the object of thought, the intelligible, is form only, without matter. Consequently this part of the soul which is called intellect is not in any act before it thinks. Therefore it is improbable that it would be mixed with body and that it would have physical qualities or would have a physical organ.(27)

But if mind is a unity and a part of the psyche, and body and soul form a single complex (syntheton), its independence cannot be absolute. Moreover, if it is unmixed in terms of not acting through a bodily organ, it is unaffected by the body's decay and in this sense impassible. Aristotle explains this impassibility by resemblance to the organ e.g. the eye, claiming that in the defective sight it is not the soul that is impaired but the physical agent: "If an old man could get the right sort of eye, he would see like a youth."(28) But Aristotle falls into contradiction saying that if the mind would be destroyed it would be by effects of old age since senility results, not from the affection of the soul, but of the body as it happens in drunkenness and in disease. So how can Aristotle say that drunkenness does not have any effect on the psyche? Instead he says: "Consequently, intellection and contemplation are impaired by loss of some other internal organ, but intellect itself remains impassible... Mind is probably something more divine and impassible."(29)

We learn next that the mind works through an intermediary -- images (fantasmata): "Intellect is the form of forms (nous eidos eidon), sensation the form of sensibles. Since it seems that nothing exists separately besides perceptible extended bodies, precisely, the intelligible forms exist in the sensible forms; both abstract concepts as well as various states and affections of the perceptible objects. For this reason no one would be able to learn or understand anything without sensation. Thus, also in intellection, one must contemplate with images
fantasmata. These resemble the things perceived, but are without matter. "How do the first thoughts differ from images? One has to say that they are not only images but that they cannot occur without them."(30) So Aristotle extends his ontological principle on the sphere of intellecution, where immaterial images are the perceptible objects of the intellect. Imagination fantasia extends to reason as deliberative imagination and to sensation as the sensitive imagination. The first one is available only to man. Deliberative kind of imagination is present in animals with reason for they can make decisions between two courses of action -- which is reasoning (logismos). Thus reason can make a unity out of a number of images. Reason is the peculiar faculty of man by which we can perceive universals by the process of generalization from perceived individuals in the act of sensation. Universals reside in the soul itself.

The concept of mind was adopted by Plato and Aristotle from Anaxagoras as the principle responsible for arranging the universe. Aristotle criticized Anaxagoras for not giving the full explanation how mind could work: "Anaxagoras himself says that intellect is impassible and has nothing to do with the rest of things. But being as it is, how and from what cause can it know? This is what Anaxagoras does not say and it is not clear from his declarations."(31) Aristotle's own solution to the problem derives from his doctrine of potentiality and act. Thus he agrees with Anaxagoras that mind is the impassible, unmixed, activity, or originating force to the material which it forms. The "form unmixed" means rather that it is unmixed with its objects, the intelligible forms.(32) Following Plato, he admits that the thinking soul is the place where the forms are and the forms are there potentially, not actually.(33)

But now Aristotle has to discuss the problem whether the mind is a separate entity and whether it could be immortal. In general, the soul cannot exist apart from the body as its actuality. But he previously indicated that there might be something that could exist separately. He indicated already that the nous is probably something more divine and is impassible.(34) Now, following rigorously his ontological principle, Aristotle states that mind must have an active as well as a passive, or an actual and potential component. One of them, the active, has to be separate and independent from the rest of the soul and obviously from the body, whereas the other one, the passive, is not. If so, then Aristotle would contradict himself, claiming previously that the mind was indivisible: mind is the highest faculty of the soul, incorporeal, unmixed with the body, impassible. These qualities suggested some superiority; something like qualities of God. But it has also to be unmixed with other forms in order that it could take all other forms in the process of thinking. Mind, thus like the rest of the soul, is pure potentiality -- "Mind is potentially, in a certain way its objects, but it is nothing actually until it thinks."(35) Human mind cannot think continually, moreover it is as potentiality, pure "matter" in sense of the substratum. It is like a receptacle able to receive the forms, the intelligibles. Again, if so, the mind would be inferior to forms and actuality.

To solve the problem, Aristotle now, proposes to analyze the mind as a whole by comparison with the physical world and without considering its nature: "Since in the whole nature, something is the matter for each class (i.e. what is potentially all those things) and something else which is the efficient cause and an agent, because it makes them all (it is the situation like an art in relation to the material). So that distinction must exist in the soul as well. Therefore, there is one nous (intellect) which becomes all things and the other nous that makes them all. The situation resembles light, since the it, in a sort of way, makes potential colors actual colors."(36)

According to the ontological principle of Aristotle, any change requires a matter with potentiality for change and an external agent to cause the change. This agent must possess in actuality the form which the subject of change will receive: "Everything in potentiality that is affected and undergoes change does so through the agency of an efficient cause already in act."(37) So, this implies that we have in nature a chain of causes until we reach the first cause. So, just as in the physical world (for physical change we have natural becoming through the parent in animals or in plants; in artificial production, the craftsman's design; in sensation, the external agent, so we have in the soul an agent that sets its potentiality in motion. However, difference exists between thought and the physical world: "There is an analogy between the sensation in act and the thought. However, the difference between them is such that the agent which produces the actuality of sensation is external, namely what is seen or what is heard as well as the other sensibles. The reason for this is that the actual sensation is of the individual, whereas the knowledge has for the object the universals, which are in a way contained within the soul itself."(38) In Aristotle's philosophy there must be a progress from potentiality to actuality but, there must be an ultimate as well as an intermediate "telos;" there must be a sequence of causes leading to the First Cause, the Ultimate Being, perfect and supreme. All this derives from his concept of the First Mover, who has to move things and keep them moving. We know today that, even in the physical world, this law of motion is not correct. Nevertheless, following this paradigm, human intellectual activity demands an external and efficient cause. So before the thinking process can take place, a faculty of taking on the intelligibles from an object is needed, the
nous, which in the act of thought becomes all things and something, an act or a pure activity which can activate the latent capacity and becomes the form itself. The analogy with light is supposed to approximate this situation though the light itself is a third factor.

Now "This nous is separate, impassible and unmixed being in its essence an activity for what is active is always worth more than what is passive, as principle is superior to matter."(39) So there is nous divided into two parts: a passive nous, which is a "matter" and the second, superior one which is the active nous. The active nous is like principle to the inferior passive nous. Moreover "Knowledge in act is identical with its object. As for the potential knowledge, it is prior in time in the individual, but speaking in absolute terms it is not prior even in time."(40) Aristotle wants to say that as sensation takes on the sensible form of an object (actuality) without its matter, so the object of thought, being an intelligible form without matter, has complete identity with thought. The actual here must precede the potential. This must mean that active reason exists before any human thinking takes place. "It is not true that the intellect in act at one time is thinking and at another is not."(41) It is not possible because its essence is activity, the description fitting the description of Aristotle's god. So this active or creative reason has to be active continually, operating as the motive cause or arche, it necessitates the eternal activity, being a pure actuality: "When separate, it is just what it is and this is only immortal athanaton and eternal aidion. But we do not remember because this is impassible and the passive nous is perishable and without the active (creative) mind, no one (nobody or nothing) thinks."(42) Aristotle suggests here that the part of nous which is pure form, actuality is immortal and eternal and must be impassible in an absolute sense. It does not carry any memory, either from the past or from the present state of existence. If we accept that, this is the part that will survive after death and obviously was before an individual (if it is eternal). The part which carries memory and can receive impressions perishes at death.

From this chapter we can deduce that only the active (or creative) reason, pure essence is immortal, eternal and entirely impassible. It is the motive cause of our ability to reason about the world that is experienced through the unity of our body and soul (psychosomatic unity) which constitutes our nature in this life. It is, however, not affected by any of these impressions and therefore it does not remember (or has any recollection). Therefore, if there is any life after death and is only possible in the form of this active intellect, it is not an individual personality or consciousness.

The remaining question is whether the creative or active reason is an internal part of our human psyche or is it external to it and if so, is it identical with the supreme, self-contemplating Cosmic Nous, the divine First Cause? The line of thinking of Aristotle supports the conclusion that Aristotle had in mind the divine Nous as the creative, active mind:

1. If it is immortal, separable, then it is not easily distinguishable from the First Intellectual Mover and if so, there is no plurality of active intellects in each individual human.

2. Similarly if it is continually active, if it is identical with its objects and if it has temporal priority it has all the qualities of God whose essence is act.

3. The ultimate moving cause in the physical world is the First Mover, though it is not present in physical things. By analogy, the Moving Cause in the soul, activating the thought of man is the ranscendent, Cosmic Nous, active by itself.

Still, mankind occupies a special place in the universe. The term divine "theion" applies to all things in the philosophy of Aristotle, but man is something more divine on account that he possesses reason. He contains more vital heat (not fire), analogous to the elements of the stars ether. "The human race is either the only known kind of animal to partake of the divine, or shares it more fully than any others."(43)

**Summary**

1. The Aristotelian concept of the soul does not correspond to any religious tradition, perhaps with the exception of the Hebrew tradition. The religious concept is fundamentally dualistic, though it may be camouflaged by the assumption of temporary psychosomatic unity with the body in the living organism.

2. Aristotle's concept of the soul fits into his larger onto logical scheme of reality as composed of matter and
form, potentiality and actuality.

3. The soul is described as the actuality or form of a living organism (living body) with all its faculties corresponding to the characteristics of life. As there is a gradualness in the degree of complexity of life, so there is a corresponding gradualness in the complexity of the soul. Man is at the top of the scale with the intellectual faculty of syllogism. However, we know today that the difference between the chimpanzee and man is of degree only.

4. The soul, being a form of the living body, perishes with the organism at death.

5. Still, in the Aristotelian ontology, the universe requires the transcendental Primal Mover or the First Cause to keep the universe in motion (changes, transformations - - today we would say continuous evolutionary process) and to maintain it.

6. The human soul is superior to those of plants and animals in that, besides all the other psychic faculties, it possesses the faculty (potentiality, dynamis) of thinking, the basis of which is the recognition and manipulation of universals. As the senses are called into activity by the external objects perceived, so similarly the nous of rational living organisms, whose objects are within it, requires a transcendental First Rational Cause, Cosmic Nous, to set in motion the intellectual process.

7. The Aristotelian idea of the First Cause, with all its consequences, is based on the erroneous Law of Motion (corrected by Galileo and Newton) and on the anthropomorphic transposition of the relationship between the cause and effect, "matter" and form (idea), from the sphere of human activity (crafts) to the Universe.

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