

COMMITTEE VI  
The Universe and Its Origin:  
From Ancient Myth to Present Reality  
and Fantasy

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**MYTHS OF THE UNIVERSE: COSMOGONY AND COSMOLOGY**

by

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## 1. Introduction: The Four -gonies

Some 25 years ago, while studying biblical myths and comparing them with the myths of other ancient Near Eastern peoples, I formulated a definition of myth which read: "Myth is a traditional religious charter, which operates by validating laws, customs, rites, institutions and belief, or explaining socio-cultural situations and natural phenomena, and taking the form of stories, believed to be true, about divine beings and heroes."<sup>1</sup>

If this definition is valid, as I still believe it is, it must hold good also for that specific category of myth which deals with questions relating to the origin, structure, and function of the universe. In effect, myths of the cosmos are attempts at the explanation of the grandest and most awe-inspiring natural phenomena observed by man and impinging on his consciousness. They do take the form of stories believed to be true about divine beings and heroes -- who in this context occasionally have animal forms-- and they answer the questions which arose in the mind of man as soon as he began to contemplate the world around him. These questions include, first of all, How did the world and its constituent parts come into being? and they go on from there to ask, What is the nature, the true character, of the visible parts of the world? How is the world structured? What is the relationship between its various parts? Why and how do these parts move?

The answers to the first of these questions are usually termed cosmogony, a term first used by Plutarch (46-c. 120 C.E.), which can be defined as theories accounting for the origin of the universe, describing in mythical, philosophical, or theological terms the events to which the cosmos owes its existence. The answers to the rest of the questions mentioned are supplied by cosmology. This term was introduced as late as in 1730 by Christian

Wolff (1679-1754), the famous German philosopher and mathematician, best known for his systematization of scholastic philosophy. A few decades later, Kant (1724-1804) introduced the term Weltanschauung, usually translated as "world view," as a synonym of cosmology. Cosmology comprises theories of the structure and nature of the universe, although it is often used as including also theories pertaining to its origin.

A closer look at the cosmogonical and cosmological myths discloses that they can be arranged into a number of distinct types or categories, whose consideration as such can be helpful in understanding the points-of-view from which pre-scientific man approached the phenomena of the world surrounding him. One of these types of cosmogonical and cosmological myths left its traces in the Bible, and the biblical view of the origin and structure of the universe, in turn, became the foundation of the world view of Judaism, Christianity, and Islam, that is, the majority of mankind. In Christian Europe, it remained dominant until the Renaissance, when it was gradually modified and/or replaced by successively broader vistas, while in the Muslim world it continued to hold its own until the 19th century, when Westernization began to chip away at it.

In the early traditions of the Near East, Greece, as well in other parts of the world, no distinction was made between cosmogony and theogony, that is, between myths relating to the emergence of the cosmos on the one hand, and to the birth of the gods, on the other. To complicate matters, the most famous example of the combination of these two subjects, the one contained in the Theogony of Hesiod (8th-7th centuries B.C.E.), also bristles with stories about the origins of highly sophisticated abstractions which are personalized: Chaos, <sup>H</sup>esiod says, "came into being" before all things, and bore

Erebos (Darkness), Night, Eros, and Desire. From the union of Erebus and night sprang Doom, Continnence, Discord, Misery, Vexation, Joy, Friendship, Pity, etc. Other abstractions, such as Terror, Anger, Strife, Intemperance, Oblivion, Fear, Pride, are said to have resulted from unions between Air and Mother Earth.<sup>2</sup>

In addition, there is in early Greek myth a feature that leads straight into archaic astronomy: it consists of stories telling of the transformation of gods, heroes, humans, animals, and monsters into stars or constellations. These myths supply answers given by early speculation to questions about the origin of features observed in the star-studded nocturnal sky, thus creating a subdivision of cosmogony which can be termed astrogony. And there is, of course, yet another type of myth telling about the origin of man, so that anthropogony together with theogony, cosmogony, and astrogony form the four basic -gonies, the inseparable mythical quartet of speculations about origins, which for thousands of years satisfied man's desire to know what was, and how that which is came into being.

#### 2. In the Beginning There Was Not...

It is characteristic of the limited nature of human imagination that the great question of how did the universe come into being was, as a rule, answered by an evasion: the answer usually given was that the world as known to the observer was the <sup>e</sup>result of a transformation from a preceding, different state, but the question of how that earlier condition originated was, as a rule, not raised. Moreover, many cosmogonies avoid saying anything positive about the pre-cosmic state of affairs, and take instead refuge in a series of negative statements whose purport is merely to emphasize the contrast between the cosmos and the chaos that preceded it. They describe the chaos

by listing a number of salient features of the cosmos as not having existed. A famous example of this type of solution to the problem of how to characterize the otherness of chaos while saying nothing positive about it, is the Akkadian creation epic (dating from the first half of the 2nd millennium B.C. E.), which begins:

When on high the heaven had not been named,  
Firm ground below had not been called by name,  
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No reed hut had been matted, no marsh land had appeared,  
When no gods whatever had been brought into being,  
Uncalled by name, their destinies undetermined -  
Then it was that the gods formed...<sup>3</sup>

A much older bilingual poem (in Sumerian and Babylonian) presents the negative features of the pre-creation world in greater detail:

No holy house, no house of the gods in a holy place had as  
yet been built,  
No reed had grown, no tree been planted,  
No bricks been made, no brick-mould formed,  
No house been built, no city founded,  
No city built, no man (adam) made to stand upright,  
The deep was uncreated, Eridu unbuilt,  
The seat of its holy house, the house of the gods, unerected,  
All the earth was sea...

Then the poem goes on to tell how the familiar world, the cosmos, emerged:

[Ea] tied (reeds) together to form a weir in the water,  
He made dust and mixed it with the reeds of the weir,

That the gods may dwell in the seat of their well-being;  
The cattle of the field, the living creatures in the field,  
he created  
The Tigris and Euphrates he made and set them in their place,  
Giving them good names.  
Moss and sea-plant of the marsh, rush and reed he created.  
He created the green herb of the field,  
The earth, the marsh, the jungle,  
The cow and its young, the calf, the sheep and its young,  
the lamb of the fold...<sup>4</sup>

It is this type of negative approach which is reechoed in Genesis 2, where we read that before God began his creative work, "No shrub of the field was yet in the earth, and no herb of the field had yet sprung up; for the Lord God had not caused it to rain upon the earth, and there was not a man to till the ground" (Genesis 2:5). Compare with this the statement in the Rig-Veda to the effect that in the pre-creation state of the world there was "neither non-existence nor existence, there was no air, nor sky that is beyond it... of neither night nor day was any token..."<sup>5</sup> The oldest of this type of cosmogonies comes from ancient Egypt where it was believed that land and water evolved in the primal chaos of the universal ocean (Nu or Nun), when "not yet was the heaven, not yet the earth, men were not, not yet born were the gods, not yet was death..."<sup>6</sup> The same idea is expressed with masterly brevity in the Upanishads, when they state that "In the beginning this (universe) was non-existent. It became existent."<sup>7</sup> Likewise a Polynesian creation myth states that in the beginning "There was no sun, no moon, no land, no mountain, all was in a confluent state. There was no man, no beast, no fowl, no dog, no living thing, no sea, and no fresh water."<sup>8</sup> According to another

version of the Polynesian creation myth, in the beginning "there was no earth, there was no sky, there was no sea, there was no man."<sup>9</sup> Also in the ancient Teutonic and Scandinavian mythology similar ideas find expression. According to the *Völuspá*,

There was, in times of old, where Ymir dwelt,  
Neither land nor sea, nor gelid waves;  
Earth existed not, nor heaven above,  
There was a chaotic chasm,  
And verdure nowhere...<sup>10</sup>

### 3. The Primal State

However, there are also numerous myths about the origin of the universe which are not satisfied with this type of minimal or negative cosmogony, and try to supply instead at least a few generalized features attributed to the age that preceded the coming-into-being of the cosmos, and, taking them as the starting point, proceed to tell how the cosmos originated, how it is constituted, and how it functions at present. The best known sub-variety of these mythical cosmogonies is that of the creation myths. Creation myths are those cosmogonic myths which explain the origin of the universe by attributing it to the creative work or words of one or more deities, or to some other extra-human beings. Broadly speaking, the myths of creation fall into two categories: the much more widespread type speaks of the creation of the universe out of pre-existing beings or materials, so that they are, in effect, not myths of creation but myths of transformation (metamorphosis); while the much rarer type tell<sup>S</sup><sub>A</sub> about creatio ex nihilo. Of this latter, the biblical creation myth of Genesis 1 is the best known, but by no means perfect, example. The tenor of Genesis is that of creation out of nothing, but the text says nowhere explicitly that God created the world ex nihilo. That

doctrine had to wait for several centuries until it was finally recorded in the 2nd century B.C.E. in 2 Maccabees, which says that God created heaven, the earth, and all that is in them, including the seed of man, out of nothing.<sup>11</sup>

The most frequently encountered type of cosmogonic myth is the one which represents the primeval chaos as space filled with water, or, to put it differently, which considers the primordial water the substance of the uncreated chaos. The Freudians, of course, have a field-day with the concept of the original chaos as water, especially when it appears, as it frequently does, together with the cosmic egg image (see below), since the mythical primordial water lends itself to being interpreted as a reflection of the amniotic fluid which surrounds the foetus in its mother's womb. Since there can be no doubt that both cosmogonic and cosmological myths are in most cases projections on a vast scale of that which man knows from his immediate environment -- of this more anon -- the parallel between the amniotic fluid in the human microcosm and the watery chaos in the macrocosm quite naturally suggests itself. And <sup>since</sup> a chaos which consists of nothing but water must of necessity be lacking of light, next to wateriness darkness is the most common feature attributed to the primordial chaotic state.

Darkness and water is how the chaos is described in numerous primitive cosmogonies in many parts of the world, as well as in those of many ancient civilizations. The Akkadian creation epic, whose opening words were quoted above, continues by stating that prior to the beginning of the creation process nothing existed but "primordial Apsu the begetter" of everything, who is a mythical personification of the fresh waters, and "Mummu (that is, mother) Tiamat," the personification of the sea, "who bore them all, their waters commingling as a single body."<sup>12</sup> That is to say, the pre-creation chaos was a condition in which nothing existed except an undifferentiated body



of waters in which sweet and salt waters were commingled.

A critical reading of Genesis 1:1-2 discloses that despite its author's avowed purpose of portraying the origin of the universe as a creatio ex nihilo performed by the all-powerful and only God (Elohim), traces of a mythical tradition postulating the existence of a primordial chaos had survived in ancient Israel: the text refers to the uncreated presence of Tohu vaBohu (chaos), Hoshekh (darkness), Tehom (the deep, a term related to Tiamat), and Mayim (waters). This was, so to speak, the raw material which stood at God's disposal when he embarked upon his six-day labors of creation.<sup>13</sup>

The Brahman creation myth, contained in the Satapatha-Brahmana, opens with the statement that "Verily, in the beginning this (universe) was water, nothing but a sea of water."<sup>14</sup> According to the Rig Veda, in the pre-creation state of the world "darkness there was at first... this all was water..."<sup>15</sup> In the creation myth of the ancient Mayas as recorded in their sacred book, the Popol Vuh, in the beginning all was calm, silent and motionless, and nothing existed save the empty sky and the calm water, the placid sea, alone and tranquil, and there was only immobility, and silence in the darkness, the night.<sup>16</sup> Likewise in Maori cosmogony, in the beginning "the universe was in darkness, with water everywhere, there was no glimmer of dawn, no clearness, no light..."<sup>17</sup>

These few examples will have to suffice to illustrate the most widespread cosmogonic myth which tells about the emergence of the cosmos from a primordial dark and watery chaos.

#### 4. The Cosmic Egg

Another familiar image used by archaic man in his cosmogonic speculation is that of the egg. The egg is a small-scale mystery upon which archaic man pondered in many places: how can the egg, which contains nothing but two undifferentiated jelly-like liquids, yet produce a few weeks later a bird or a

reptile complete with all of the many parts of its body? The answer, of course, eluded him, but the potential of cosmic meaning contained in the egg did not. Hence cosmogonic myths from such widely scattered places as Egypt, India, Greece, Finland, Esthonia, Borneo, Tahiti, the Society Islands, Hawaii, New Zealand, Africa, assert that the pre-creation shape of the primordium was that of a gigantic egg.<sup>18</sup>

For the cosmos to be able to emerge, the world egg had to be split in two, as Marduk split Tiamat. Splitting in two often signifies the separation of the undifferentiated continuum of the sky and the earth, or of the Upper Waters and the Lower Waters, so as to produce a space between them in which the creatures can move about. A considerable number of myths belongs to this type, telling of the god, or the hero, who pushed apart the chaotically intermingled elements. The most famous of these myths is the ancient Egyptian one which recounts how Shu, the god of the air, raised Nut, the sky-goddess, from Geb, the earth-god.<sup>19</sup> This Egyptian myth of origin is exceptional inasmuch as it makes the sky feminine and the earth masculine -- gender attributions which reflect in the first place the fact that in rainless Egypt the life-giving waters -- widely considered the equivalent of the male sperm fructifying the earth -- originate not from the sky but from the earth, in the form of the River Nile. In other cosmologies the rain-giving sky is masculine and the earth which receives the blessing of the rain is feminine. But common to the Egyptian and many other myths of origin is the notion that the sky had first to be raised up from the bosom of the earth ere the cosmic order as we know it today could be established.

Cosmogonic myths explaining in this manner the origin of the sky on high, of the earth beneath, and of life in its myriad forms in between, are found in many parts of the world, including Babylonia, Mongolia, India, China, Indonesia,

Micronesia, Central and Western Polynesia, Hawaii, Samoa, New Zealand, North and South America, Africa. They are grouped conveniently by Stith Thompson in his Motif Index under "Raising of the Sky" (A625.2). In fact, they are so widespread that one suspects that they constitute a classical example of the Eastianian Völkergedanke. Stripped to its barest essentials, the separation of the sky and the earth is but a variant of the more basic myth which tells about the splitting of the cosmic egg into two as a prerequisite for the processes of creation to be able to begin.

#### 5. Creation by Deicide-Parricide

A widespread type of cosmogonic myth is the one which accords the chronological primacy to an original generation of monstrous or gigantic deities, who, at a certain point in time, are killed by members of a younger generation of gods, who then proceed to fashion the existing cosmos from the bodies of their colossal divine progenitors. The classical example is found in the Enuma Elish, the Babylonian creation epic, already quoted above. In it Marduk kills his ancestress Tiamat, splits her body into two, and makes the vault of heaven of one half, and the earth of the other. Parts of Tiamat's body become geographical features either familiar to the people of Mesopotamia -- from her eyes flow the great rivers Tigris and Euphrates -- or imagined by them to exist -- from a loop of Tiamat's tail Marduk fashions the link between the sky and the earth.<sup>20</sup> Kingu, Tiamat's son and consort, is also killed, and of his blood Ea, the father of Marduk, creates mankind.<sup>21</sup>

The Hittite myth of theogony-cosmogony tells of a succession of several generations of gods, each of whom kills or vanquishes his predecessor. One of them, Kumarbi, bites off and swallows the genitals of his father Anu, becomes pregnant as a result, and gives birth to the River Tigris and to the storm-god, who, in due course, defeats Kumarbi.<sup>22</sup>

In contrast to the gory tenor of these Babylonian and Hittite myths of origin, the oldest Egyptian creation myths reflect, not human cruelty, but merely frailty and concupiscence. According to the solar theology of Heliopolis, the god Re-Atum-Khepri, whose three names stand for the sun at noon, the setting sun, and the rising sun, in this order, performed the act of creating the first divine couple, Shu (the air) and Tefnut (his female counterpart) by masturbating or spitting.<sup>23</sup> (Let me mention here in parentheses that creation by masturbation is found also in an Easter Island myth, creation by spitting in Melanesia, and creation by coughing in Mono Alu.<sup>24</sup>) Shu and Tefnut, in turn, gave birth to the god Geb (earth), and the goddess Nut (sky), of whose tight embrace and separation by Shu we have just heard. Once Geb and Nut were separated, and Nut lifted up high into the sky, Osiris, Isis, and other gods could be born, and Egypt, the kingdom of Horus, could be established.<sup>25</sup> This is but one of several ancient Egyptian cosmogonies; others were associated with Memphis, Hermopolis, and other great Egyptian religio-cultural centers, but limitations of space prevent their presentation.

Greece, in the bloodiness of its mythical cosmogony is nearer to Babylonia and the Hittites than to Egypt. The Greek myth, too, traces the origins of the world to a series of parricides and bloody scenes in which the protagonists are gods symbolizing or representing primeval elements. Uranos, the sky-god, is castrated and supplanted by his son Kronos, whose name bears a resemblance to, although has no necessary connection with, the Greek term for time, khronos. Kronos, in turn, is castrated by his son Zeus, who, as a result of this unfilial act, becomes the king of the gods. From the blood and parts of the severed genitals of Uranos that fell upon the earth were born Aphrodite, the Erynies (furies), the giants, and tree-spirits,<sup>26</sup> as well as certain islands in the Aegean.<sup>27</sup> In Scandinavian mythology (as exemplified in the *Völuspá*), the gods

Odin, Vili, and Vé kill their great-grandfather Ymir and fashion the world by filling the awesome and dark abyss with his huge body.<sup>28</sup>

Generalizing one can state that polytheistic myths of cosmogony, which are often intrinsically commingled with theogony, are suffused in most cases with streaks of sensuality, callousness, and even cruelty which no effort at symbolic interpretation can mitigate. The gods of Mesopotamia, Egypt, Syria, Canaan, Greece, and Rome have insatiable sexual appetites, put to death and devour their offspring, sons emasculate and kill their fathers, murder and dismember their mothers, and brother does the same to brother. Goddesses, seized with unexplained frenzy, tear to pieces their sons or other persons, and then eat them. Gods inflict all kinds of cruel and unusual punishment on each other and on men whose guilt is but inconclusively established.<sup>29</sup> As against this barbaric company of divinities whose acts give expression to <sup>some</sup> of the darkest features of man's evil inclinations, the biblical God stands out as a beacon of light, even in his earliest and sternest manifestations, as he revealed himself to the first heroes of Genesis, and even more so in the majestic, compassionate God-concept developed by the great Hebrew prophets, the creators of universal ethical monotheism. No wonder that Christianity and Islam, the two triumphant daughter-religions of Judaism, were able between them to convert more than half of the human race to their respective version<sup>s</sup> of monotheistic faith.

It is precisely the intrinsic otherness of biblical religion when viewed against the background of the pagan world that makes it so challenging and intriguing to try to show that traces of polytheistic cosmogonies have survived in the Bible. Such survivals undoubtedly can be found, as in the biblical passages which allude to God's fight with a primeval dragon, or even in the mere fact that, despite the ostensible tenor of the Genesis creation story

about the divine fiat which produced the cosmos out of nothing, a number of pre-creation chaotic elements managed, so to speak, to slip into the narrative and can be discerned by modern scholarly acuity. I myself fell under the spell of this challenge and succumbed to the lure of demonstrating the existence of such mythical elements in Genesis, as evidenced by the book Hebrew Myths, which I wrote jointly with my friend Robert Graves in the early 1960's. What I did not emphasize in that book, but want to do now, is that those few archaic features notwithstanding, the Genesis account of creation by divine will and word is a unique achievement of the ancient Hebrew religious genius, which places biblical cosmogony in a category sui generis in the multiplicity of global creation myths.

#### 6. Cosmos Out of Man

A number of cosmogonies attribute primacy to man over the cosmos by telling about the fashioning of the world out of the body of a primordial gigantic man, or of some other monstrous but quasi-human creature. The myth of the creation of the world out of the body of man was the subject of an early study by Jacob Grimm, the great German mythologist, who assembled much material to show that this myth preceded its reverse, which tells of the creation of man out of the earth, familiar to all from Genesis 2:7.<sup>30</sup> Other researchers opined that the notion that the world came into being as a result of <sup>a</sup> primordial human being having been sacrificed is based on the annual rite of sacrificing a man (or an animal) as part of a vernal ritual performed for the fertilization of the earth.<sup>31</sup> A third explanation has it that in archaic view the primal matter of which the world was fashioned had to be a living and thinking being, and only man was such a creature.<sup>32</sup>

The primeval giant, whose body supplied the raw material for the fashioning of the cosmos is occasionally envisaged as an enemy of the gods, and this is why

he is killed by them. In this version of the cosmogonic myth the fashioning of the cosmos out of the immense carcass is almost an afterthought and nothing more. This is the impression one gets from the Babylonian myth of Marduk and Tiamat, of which we heard above, and which is retold in detail by Berossus, the 3rd century B.C.E. Babylonian priest and author.<sup>33</sup> In a parallel Indian myth, the gods sacrifice Purusa, the first gigantic man, and out of his body fashion the world. "When the gods cut Purus<sup>a</sup> into pieces, into how many pieces did they cut him? By what names did they call his mouth, his arms, his thighs, and his feet? The Brahman was his mouth, from his arms came into being Rajanya, from his thighs Vaysiya, from his feet Sudra. From his spirit came the moon, from his eye the sun, from his mouth Indra and Agni, from his breath Vayu, from his navel the space of the air, from his head the sky, from his feet the earth, from his ears the four winds. Thus did they fashion the worlds."<sup>34</sup> Other Indian myths tell of the creation of the world from the bodies of other primal deities: Narayana, Vishnu, and Krishna.<sup>35</sup> A different variant is found in the Laws of Manu: the creator, "absorbed in meditation, emitted from his own body the various creatures; he emitted even the waters in the beginning, and in them infused seed."<sup>36</sup>

In Persian cosmogony Gayomard takes the place of the Indian Purusa. Out of the body of this primal man came the metals; "the soil upon which Gayomard died is the gold, and from the other lands in which the dissolution of his limbs took place came the various kinds of metals."<sup>37</sup> Another source gives the names of the eight metals which came from the limbs of Gayomard, seven of them those associated with the seven planets.<sup>38</sup> In the Pahlavi Rivāyat (tradition) to the Dātastān I dēnik, a theological work, it is said that the various creations evolved out of a man-like body. The sky was created from its head, the earth from its feet, the waters from its tears, the plants<sup>t</sup> from its hair, the bull

from the right hand, and, finally, fire from the mind.<sup>39</sup>

According to Manichean teachings, the primordial man was a gigantic light creature. He fought Satan, was saved, and was raised among the gods. But he did not remain unhurt: as a result of the attack of Satan light-particles broke off from him, and darkness got control over them. They got mixed together with corresponding particles of darkness, and in this manner the world came into being with its twofold nature composed of good and evil.<sup>40</sup> Similar ideas are found in the Zohar, the great 13th-century mystical text of Judaism.<sup>41</sup>

A Chinese myth, found also in countries adjacent to China, reports that once upon a time heaven and earth were inextricably commingled, like a chicken's egg, within which was engendered P'an-ku (perhaps "Coiled-up Antiquity"). After thousands of years P'an-ku increased in size, and thus separated heaven from earth. When P'an-ku died, his left eye became the sun, his right eye the moon, and from his breath came the wind and clouds. His voice turned into thunder, his flesh into fields, his bones and teeth into stones and minerals, his body-hair into trees and plants, his marrow into gold and precious stones, his sweat into rain, and <sup>the</sup> parasites on his body became the first parents of the human race.<sup>43</sup>

We have heard above of the Scandinavian myth of Ymir which can serve as an example, not only of the killing of the father-god and the fashioning of the world from his body, but also, in view of the blurred boundary-line between primordial god and man, of the shaping of the cosmos from the body of a gigantic human.<sup>44</sup>

A similar myth is found among the Gilbert Islanders (on the equator, east of New Guinea). They say that Na-Arean killed his father, Na-Atibu, with the latter's consent, took his right eye and threw it into the eastern sky where it became the sun; took his left eye and threw it against the western sky where it became the moon. He scattered his brain <sup>over</sup> ~~to the length and width of~~ the sky where it became stars, he <sup>sowed</sup> ~~strewn~~ his flesh over the water - and it became rocks



and stones. Then he took the ~~stones~~<sup>b</sup> and ~~sprinkled~~<sup>planted</sup> them on the first ~~dry~~ land, the Island of Samoa. And from the bones of Na-Atibu grew "the tree of Samoa," the first ~~father~~<sup>ancestor</sup>.<sup>45</sup>

Ancient Jewish legends also speak of the Adam Qadmon, the primal man, who, in contrast to Genesis 1, is portrayed as the first of God's creatures. His body was so huge that it filled the universe, and therefore the angels mistook him for a second deity, until God reduced his size to a mere one thousand cubits. From parts of his body originated heaven and earth and all the rest.<sup>46</sup> This, I believe, is the nearest conjunction ever reached by talmudic with pagan cosmogonies.

#### 7. Macrocosm - Microcosm

An overview of the source-material and the studies dealing with mythical cosmogony and cosmology and with their relationship to the central rituals in archaic, ancient Near Eastern, and primitive societies shows that two major thought-processes are involved which proceed in opposite directions: at first from man to the cosmos, and then from the cosmos to man.

As far as the myths about the structure of the universe are concerned, the major elements in them are built upon observations made by man in his immediate environment: the cosmos is conceived of as a replica on an immense scale of such familiar natural features as mountains, caves, islands, the sea, lakes, springs, as well as trees, animals, humans, or else of such man-made structures as tents, huts, houses, cellars. Selected items from among these environmental features are vastly enlarged in human imagination, projected into space, and by this mental process the baffling observed phenomena of earth, sea, sky, luminaries and stars are made understandable. Thus the heaven is stated to have windows, to be supported by pillars or by mountains, or by a great tree, the sun and moon are said to be kept in a box, a pot, or a pit, or they are a

man and a woman, or disks carried between the horns of a bull or sitting on the back of a buffalo. What is involved here is, of course, a projection from the small-scale known to the large-scale unknown, so that the latter, by being viewed as an enlarged replica of the known, becomes itself a known. In this manner the threatening and fearsome quality which is inherent in the unknown is removed, or at least diminished. Through such processes the cosmos becomes not only reduced in scale in the eyes of the beholder, but also humanized, and therewith man's at-home feeling in the universe is enhanced, and his centrality in the cosmos affirmed.

This reductio ad humanum finds its most detailed and meticulous expression in the macrocosm-microcosm analogy, in which correspondences are sought, and found, between features contained in the universe, the great cosmos, and those of the human body, the small cosmos. To take our first example again from ancient Babylonia, there parts of the human body were viewed as corresponding to the planets: the human arm was Mercur, the hand Venus, the eye the sun, the mouth Mars, the head Saturn, etc.<sup>47</sup> Similar concepts were found also in China, as well as in Greece, especially in the Stoic school. According to Plato, man was created in the image of the world and after its pattern.<sup>48</sup> The same idea is expressed in the Bundahishn, the most important Pahlavi work on cosmology, which is an exposition of the information as provided by the Pahlavi version of the Avesta,<sup>49</sup> and in which the parallelism between the macrocosm and the microcosm is emphasized.<sup>50</sup>

In the Jewish Midrash the same idea is expressed as follows: "Our sages taught: The creation of the world was like unto the creation of man, for everything the Holy One, blessed be He, created in his world he created in man. The firmament is the head of man, the sun and the moon are the eyes of man, the stars are the hair of man..." Then follows a detailed comparison between

each of the twelve signs of the Zodiac and corresponding features discerned in the human body. Thereafter, descending to the sublunar world, the author finds that mountains and hills, fields and deserts, forests and trees, big and small animals, rivers and seas, hot and cold winds, all have their equivalents in the body of man.<sup>51</sup>

Clear traces of these old notions are found in Muslim thinking, and especially in the doctrines of the Ikhwān al-Ṣafā, "the Brethren of Purity," the name under which the authors of the 10th-century Rasā'il Ikhwān al-Safā ("Epistles of the Brethren of Purity") conceal their identity. This very influential work is a kind of general compendium of the sciences (including arithmetic, geometry, astronomy, music, logic, "bodily and natural sciences," psychical and intellectual sciences, metaphysical and legal sciences) which was intended to be a manual of instruction for the "Brethren."<sup>52</sup> In it man is pronounced to be the symbol (ramz) of the universal existence (al-wujūd), a complete miniature model of the universe, i.e., a veritable microcosm. Everything that is in the universe God placed also into man: the body is like the earth, the bones like mountains, the brain like mines, the belly like the sea, the intestines like rivers, the nerves like brooks, the flesh like dust and mud, the body hair like plants, etc.<sup>53</sup> Similar ideas recur in the writings of al-Ghazālī (1058-1111), the outstanding Muslim theologian, jurist and mystic, who says, e.g., in his Kīmīyā al-Sa'āda ("The Alchemy of Happiness") that his intention has been to show that man is a great world, and that the human body is the kingdom of the heart and resembles a great city. Hence "man has truly been termed a microcosm."<sup>54</sup> Also according to the Rasā'il the human body is like a city.<sup>55</sup> These speculations exemplify the macrocosm-microcosm equation from the point-of-view of the medieval Muslim urbanite for whom his city equalled, or at least symbolized, the universe.

It is not difficult to discern in these macrocosm-microcosm equations the reversal of the original thought process which aimed at a reduction of the cosmos to human, and hence humanly apprehensible, dimensions. These equations no longer present man as the basis of understanding the cosmos; on the contrary, they postulate the cosmos as the basis of understanding man. Their aim is to render intelligible, not the cosmos, but man, as the microcosm, the miniature replica of the immense features comprised in the macrocosm. The thought processes underlying these equations take the cosmos as their point of departure, and proceed to attribute to man features, properties, and characteristics which the cosmos was believed to comprise. There with the process of familiarization with, and mental domination of, the cosmos was truly completed: the cosmos was not only reduced to a human scale, but man was seen as the equivalent of the cosmos, the reflection of cosmic features, the representative of the cosmos on earth, and hence, without doubt, the center of the universe.

#### 8. The Cosmic Structure

Ancient cosmologies often depict the universe as a three-storied structure, with heaven above, the earth below, and the subterranean world, usually consisting of water, beneath the earth. This is how the image of the universe can be reconstructed from scattered references found in the Bible.<sup>56</sup> The three-storied structure of the world was a commonplace in the ancient Near Eastern cosmologies.<sup>57</sup> A complementary structural notion is that both the heaven (or sky) and the earth are supported by pillars. This idea is found in Babylonia and Egypt, in the Bible and in Greece, as well as in Siberian, Norse, Eskimo, and Tahitian cosmologies.<sup>58</sup>

Here we again discern early attempts<sup>5</sup> to reduce the mysteries of the universe by explaining them in familiar architectural terms: the heaven is held

up above the earth by pillars as is a human habitat or a temple, and in the same manner is the earth lifted up above the subterranean realm. Other mythologies, such as those of the Siberians, the Norse, the Irish, and the North American Indians, speak of the upper and lower worlds as being connected to the earth with rivers or bridges.<sup>59</sup> A larger concept was that of the Sumerians who considered the starry sky an image, not of their houses, but of their country as a whole, traversed by rivers, protected by dikes, and divided by canals.<sup>60</sup>

A widespread type of projection of the earthly familiar to the cosmic unknown for the purpose of reducing the latter to dimensions managable by human understanding is the image of the world as a tree. The world-tree is either the imago of the cosmos as a whole, or is considered the center of the world and the support of the universe. Such images are found both in the ancient Near East (Kishkanu) and in Germanic religion (Yggdrasil). In the Upanishads the eternal, inverted Ashvatta tree, with its roots on top and its branches below, signifies the pure Brahman, the non-death, in which rest all the worlds. Its branches are the ether, the air, the fire, the water, etc.<sup>61</sup> In Altaic religions, among the arctic peoples, and in the Pacific area the world-tree is represented ritually and is connected with the cultic vessels.<sup>62</sup> It appears also in Babylonian, Norse, Irish, and North American Indian mythologies.<sup>63</sup>

Thus we have the cosmos perceived in the shape of either a man-made three-storied structure, or the largest feature found in the vegetative world, the tree.

#### 9. Temple and Cosmos: Structure

In ancient Near Eastern traditions and in other ancient cultures as well the Temple represents the universe. In India, Persia, Babylonia, Egypt, Rome, Byzantium, and elsewhere, the most important temples or sanctuaries were considered replicas in miniature of the world.<sup>64</sup> The same idea with reference to

Jerusalem Temple is alluded to in Psalm 78:69 which says that the Lord "built His sanctuary like the heights, like the earth which He hath founded forever." That the psalmist speaks of God and not of Solomon as the builder of the Temple is consonant with the biblical tradition according to which David received the "pattern" of the Temple "by the spirit," that is, by divine inspiration (cf. 1Chron. 28:11-12). In talmudic tradition it was a fixed tenet that the Jerusalem Temple, down to minute detail, was an architectural model of the universe.<sup>65</sup> The same notion is presented by Josephus Flavius, the first-century C. E. Jewish historian, who says in his Antiquities of the Jews that the three parts of the Temple, the Court, the Holy House, and the Holy of Holies, correspond to the three parts of the universe, the sea, the earth, and the heavens.<sup>66</sup> Also according to Philo of Alexandria (ca. 20 B.C.E.-ca. 50 C.E.), who lived a generation before Josephus, there was a symbolic connection between the universe and the Temple; thus, e.g., the seven-branched candelabrum was a symbol of heaven, and the altar of incense was the symbol of earthly things.<sup>67</sup> Likewise, the talmudic sages considered the seven lights in the great Menorah to represent the seven planets; the "bronze sea" -- the cosmic ocean; the twelve oxen upon which that big basin stood -- the twelve signs of the Zodiac. The very rock upon which the Holy of Holies stood, the so-called "Foundation Stone," was believed to be the navel of the earth and the first created thing, under which mysterious shafts led down into the depths of the primordial abyss.<sup>68</sup>

The most succinct and striking expression of the symbolic unity between the world and the sanctuary comes from ancient Rome. The Latin term mundus, which means the world, the universe, the cosmos, was also the name of the sacred pit in Rome, in the Comitium, the place of assembly near the Forum. It was kept covered all year round by the lapis manalis, the stone of the manes,

the shades of the dead, but was opened three times a year to receive fruit offerings thrown into it. The designation of both the cosmos and the sacred pit by the same name suggests the identification of the two by the ancient Romans.

Another variety of the temple-cosmos equation is the notion that the earthly temple is a replica, not of the cosmos, but of a heavenly temple prototype. This idea, too, is found in Babylonia and Jerusalem.<sup>69</sup> A third variety of the same concept is that the earthly city is built after the patterns of a heavenly city. Well known is the notion of a "heavenly Jerusalem" of which the earthly Jerusalem was but a pale copy.<sup>70</sup> In a fourth variety the entire cosmos or certain parts of it are models for town-planning, and the actual building of the city is executed in a manner which presupposes the interpretation of the starry sky as a mysterious map which the priestly astronomer-architect knows how to follow.<sup>71</sup> Thus the Babylonian cities had their archetypes in the constellations: Sippar in Cancer, Niniveh in the Great Bear, Eridu in Vela, Babylon in Ceta-Aries.<sup>72</sup> A modern example is that of the Dogon in western Mali who lay out their villages, fields, and houses in a pattern that is in keeping with the creation myth, and, moreover, expressly state that their kinship system, too, is based on that myth.<sup>73</sup>

Although ostensibly notions such as these explain nearby physical structures (such as temples, cities, canals, divisions of fields) or social systems in cosmological terms, what these traditions and beliefs actually achieve psychologically is to diminish the distance between cosmos and man, and between what man sees in the cosmos and what he builds for himself on earth.

#### 10. Temple and Cosmos: Function

These observations lead us over from structure to function. Again a few examples will have to suffice to illustrate a phenomenon widespread in both

time and space. In Babylonia, where the temple was the imago mundi, its construction was considered a reiteration of cosmogony.<sup>74</sup> In ancient Israel, where the Temple of Jerusalem was a representation of the cosmos, its building, commenced according to legend, by King David, was a repetition of creation, and so was the complex ritual of the "Joy of the House of Water Drawing" performed every autumn in the Temple.<sup>75</sup> In addition, the New Year, celebrated two weeks earlier than that feast, was considered a re-actualization of creation. As a talmudic prayer puts it, "This day is the beginning of Thy works, a remembrance of the First Day."<sup>76</sup> This prayer is to this day part of the Jewish New Year observance in an almost identical form: "Today is the birth of the world."

In the Brahmanic ritual the construction of the sacrificial altar is considered a "creation of the world."<sup>77</sup>

The common element in these examples, which could easily be multiplied, is that they express the need to repeat, re-enact, creation. As Mircea Eliade put it, the "repetition, by actualizing the mythical moment when the archetypal gesture was revealed, constantly maintains the world in the same auroral instant of the beginning."<sup>78</sup> I would add that archaic societies manifest not only the need to repeat annually the great moment of creation, but feel compelled to do so in order to invigorate nature, man, and the entire terrestrial and extra-terrestrial universe, through a symbolic repetition of the cosmogonic process which inaugurated the present state of the cosmos, and made the world habitable for man.

It was inevitable that the temple, the sacred center, the representation of the cosmos on earth, should play the central role in these rituals. The temple ritual had, in the first place, cosmic significance -- to wit, to ensure the well-being of man. As Hocart put it, "The object of the ritual is to make the macrocosm abound in the objects of man's desire."<sup>79</sup>

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Of the many rituals performed in the temple with this purpose in mind none was more complex and believed to be more effective than that of the New Year. The typical New Year ritual consisted of detailed and symbolic re-presentation of the events of creation, achieving thereby the re-invigoration of the world and the assurance of the orderly functioning of the cosmic forces upon which depended the well-being and the very existence of man.<sup>80</sup> Therewith the relationship between the cosmos and man was no longer a one-way street. Instead, a reciprocity was established between them. No longer did only man depend on the cosmic powers that be, but also the latter were now recognized to be dependent on man. The sun and the moon, the stars, the forces which animated the earth, and all that which existed on it were, it was now known, able to function in the proper manner which was prescribed for them in those great days when chaos gave way to cosmic order, only if man performed that great annual ritual, re-enacting the awesome drama of creation and thus rejuvenating, reinvigorating the cosmos and assuring that everything would go on as it should for yet another year.

But much more than the mere re-enactment of creation in a temple ritual was involved in the relationship between man and the cosmos as played out on the archaic scene. The forces of chaos, although defeated by the creator-god or gods in the cosmic struggle or the theomachia which had to be waged before creation could be accomplished, were not rendered totally harmless. They continued to exist, albeit bound, subdued and imprisoned in their subterranean realm, and were always ready to break out and threaten the world with a cataclysm, or total annihilation. The great flood, which destroyed mankind and the world in the days of Utnapishtim, or Noah, or Deucalion and Pyrrha, was an event in which the forces of the deep, of Tehom-Tiamat, of chaos, were able to gain the upper hand. They were believed to continue couching beneath the

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foundations of the temples of Hierapolis in Syria, Jerusalem, and other sanctuaries, and their lesser manifestations were seen in the uncontrollable natural catastrophes which from time to time devastated the cultivated land. Thus in ancient Sumer, to mention only one example, where the cultivated land had to be constantly protected from the marshes, floods, and sand-storms which represented the forces of chaos, this labor of maintaining order in the face of the constant threat of disorder was considered an activity duplicated the primeval creative work of the gods. Therewith the everyday life of the people was elevated into the realm of divine creativity, while the creative acts of the gods, who first introduced order into chaos, were seen as something akin to the work of man who subdued and kept at bay the destructive forces of untamed nature.

### 11. Conclusion

Our cursory review of the <sup>a</sup> meaning of mythical cosmogony and cosmology has, I believe, shown that those speculations and traditions were for archaic man, primitive man, and historic man until the modern scientific revolution, much more than mere answers satisfying his curiosity about the great riddles of the universe. They were charters containing eternal instructions<sup>s</sup> about the performance and meaning of his most important rituals which secured the universe for him and his place in the universe, and for embarking upon great civilizatory ventures such as bringing land under cultivation and building cities. And, above all, the myths of the cosmos provided psychological reassurance for man in his relationship to the cosmos by convincingly showing the cosmos to be anthropocentric.

The role mythical cosmogony and cosmology played in the religious, social, and cultural life of the peoples of the ancient Near East and the classical world was first discussed fifty years ago by E. Burrows, and was subsequently

taken up by several other scholars.<sup>81</sup> What has, as far as I know, not been so far the subject of scholarly scrutiny is the relationship between mythical cosmogonies and cosmologies and the modern scientific study of the universe. Scholars who will direct the search-lights of their minds to this subject will, of course, find that mythical cosmogonies and cosmologies have the historical primacy over scientific observations and theories, a primacy on the order of thousand<sup>s</sup> of years. But those myths did much more than merely precede in time the great science of astronomy. They satisfied the awakening human curiosity about the awe-inspiring visible cosmos. They interpreted the cosmos anthropomorphically, and represented it as anthropocentric, giving man a measure of self-assurance during the long millennia when he was helpless against the overwhelmingly powerful forces of nature. They provided man with what was believed to be practical and effective means of controlling nature, or at least influencing it to his advantage, and of dealing with the divine powers which were postulated as the moving forces behind and above the visible universe. And, above all, by focussing human attention on the cosmos for thousands of years, the mythical cosmogonies and cosmologies paved the way for a gradually sharpening observation of the universe and an understanding of its nature, its structure and its functioning, which observation and understanding ultimately resulted in the birth of modern cosmology, astronomy, astrophysics, and space science.

#### Notes

1. Cf. Raphael Patai, "What Is Hebrew Mythology?" Transactions of the New York Academy of Sciences, Ser. II, vol. 27 (Nov. 1964), p. 73.

2. H. J. Rose, A Handbook of Greek Mythology (London: Methuen, 1933), p. 19; Robert Graves, The Greek Myths (Baltimore, Maryland: Penguin Books, 1955), 1:33.

3. James E. Pritchard (ed.), Ancient Near Eastern Texts Relating to the Old Testament, 2nd ed. (Princeton, N. J.: Princeton University Press, 1955), pp.60-61.
4. Encyclopaedia of Religion and Ethics 4:129, quoting Pinches, Journal of the Royal Asiatic Society, 1891, pp. 393-408.
5. Encyclopaedia of Religion and Ethics 4:144, quoting Pyramid of Pepys 1, 1. 663.
6. Rig Veda X, 129, 1-3. Cf. S. Radhakrishnan and C. A. Moore (eds.), A Source Book in Indian Philosophy (Princeton, N. J.: Princeton University Press, 1957), p. 23, as quoted by Charles H. Long, Alpha: The Myths of Creation (New York: George Braziller, 1963), p. 169.
7. Swami Nikhilananda, The Upanishads (New York: Harper & Bros., 1959), 4:218, as quoted by Long, *ibid.*, p. 134.
8. Teuira Henry, Ancient Tahiti. Bernice P. Bishop Museum Bulletin 48 (Honolulu: Bishop Museum Press, 1928), p. 339, as quoted by Long, *ibid.*, p. 141.
9. A. S. Craighill Handy, Polynesian Religion. Bishop Museum Bulletin 34, 1927, p. 11, as quoted by Long, *ibid.*, p. 122.
10. Encyclopaedia of Religion and Ethics, 4:177.
11. 2Macc. 7:28.
12. Pritchard, *loc. cit.*
13. Cf. Robert Graves and Raphael Patai, Hebrew Myths (New York: Doubleday, 1964), pp. 21ff.
14. Julius Eggeling (transl.), Satapatha Brahmana XI, 1, 6, in Sacred Books of the East (Oxford: Clarendon Press, 1900), 44:12, as quoted by Long, *ibid.*, p. 130.
15. See source above in note 6.
16. Adrian Recinos, Popol Vuh: The Sacred Book of the Ancient Quiché Maya (Norman: University of Oklahoma Press, 1950), pp. 81ff., as quoted in Long, p. 170.

17. Hare Hongi (transl.), "A Maori Cosmogony," The Journal of the Polynesian Society 16:63 (Wellington: Polynesian Society, Sept. 1907), p. 113, as quoted by Long, *ibid.*, p. 172.

18. Stith Thompson, Motif Index of Folk Literature A641, A655, A701.1. Cf. Long, *ibid.*, pp. 109-45; Mircea Eliade, A History of Religious Ideas, 1. From the Stone Age to the Eleusynian Mysteries (Chicago: The University of Chicago Press, 1978), p. 88.

19. Rudolf Anthes, "Mythology in Ancient Egypt," in Samuel N. Kramer (ed.), Mythologies of the Ancient World (New York: Doubleday Anchor Books, 1961), pp. 36-37.

20. Cf. Eliade, A History, pp. 70-72.

21. Pritchard, p. 68.

22. Pritchard, pp. 120-21.

23. Eliade, A History, p. 88.

24. Stith Thompson, Motif Index, A615.1, A618.1, A618.2.

25. Anthes, *ibid.*, p. 36.

26. Rose, Greek Mythology, p. 22.

27. Graves-Patai, Hebrew Myths, ch. 21.4.

28. Enc. of Religion and Ethics 4:178.

29. Examples can easily be located in any textbook of mythology and history of religions.

30. Jacob Grimm, Deutsche Mythologie (reprint: Graz: Akademische Druck- und Verlagsanstalt, 1953) 1:471.

31. A. M. Hocart, Kingship (Oxford University Press, 1927), pp. 192f.; Wilhelm Bousset, Hauptprobleme der Gnosis (Göttingen: Vandenhoeck und Ruprecht, 1907), pp. 209-11. Cf. Raphael Patai, Man and Earth in Hebrew Custom, Belief and Legend (in Hebrew. Jerusalem: Hebrew University Press, 1942), 1:177.

32. V. Aptowitz, "Arabisch-jüdische Schöpfungstheorien," Hebrew Union College Annual (1929), 6:222, n. 49; Bousset, *ibid.*, pp. 212, 215, 230, n. 74.

33. Hugo Winckler, Die Babylonische Welterschöpfung (Leipzig: Hinrich, 1906), p. 21; Stephen H. Langdon, The Mythology of All Races, vol. v. Semitic (Boston: Archaeological Institute of America, Marshall Jones co., 1931), pp. 290ff.;

Hocart, *loc. cit.*

34. Rig Veda X. 90, as quoted by Bousset, *ibid.*, p. 210. Cf. Chantepie de la Saussaye, Lehrbuch der Religionsgeschichte (Tübingen, 1905), 1:107; 2:68; Aptowitz, *ibid.*, p. 215, n. 22;)

(Hocart, *loc. cit.*; Aptowitz, *ibid.*, p.

215, n. 22.)

Eliade, A History, p. 224, gives a somewhat different translation, and does not quote the full list of features fashioned from the body of Purusa.

35. Bousset, *ibid.*, pp. 214f.

36. A. M. Hocart, Kings and Councillors (reprint: Chicago: University of Chicago Press, 1970), pp. 65-66, quoting Laws of Manu 1:8.

37. Bousset, *ibid.*, pp. 202f., 206.

38. Aptowitz, *ibid.*, p. 230; Bousset, *ibid.*, pp. 206-7.

39. M. J. Dresden, "Mythology of Ancient Iran," in Kramer, Mythologies, p. 339.

40. Bousset, *ibid.*, pp. 178f., 181; Oskar Dähnhardt, Natursagen, vol. 1,

Sagen zum Alten Testament (Leipzig-berlin, 1907), p. 25; Scheftelowitz, Archiv für Religionsgeschichte 28 (1930), pp. 212ff.

41. Aptowitz, *ibid.*, p. 241.

42. E. g. Zohar, Genesis, 23b.

43. Chantepie de la Saussaye, *ibid.*, 1:279; Hilda Arthurs Strong, A Sketch of Chinese Arts and Crafts (Peking, 1926), p. 3; Derk Bodde, "Myths of Ancient China," in Kramer, Mythologies, pp. 382-83.

44. Edda 2, 3. Cf. Grimm, Deutsche Mythologie 1:440, 464f.; Börtzler, Archiv

ffr Religionswissenschaft 33 (1936), 230ff.; Chantepie 1:107; Enc. of Rel. and Ethics 5:128; Bousset, *ibid.*, 211, n. 1; Hocart, *ibid.*, p. 194.

45. Hocart, *ibid.*, p. 107; Baglan, *ibid.*, p. 102.  
pp. 194-95.

46. Cf. Patai, Man and Earth 1:180-88, and esp. p. 184. Myths of many peoples about the creation of the universe from parts of man's or a creator's body are catalogued in Stith Thompson, Motif Index A614.

47. Hugo Winckler, Die babylonische Kultur (Leipzig: Hinrich, 1902), p. 23.

48. Plato, Timaeus 44-47.

49. Dresden, *ibid.*, p. 335.

50. Marijan Molé, Culte, mythe et cosmologie dans l'Iran ancien: Le probleme zoroastrien et la tradition mazdéenne (Paris: Presses Universitaires de France, 1936), Annales de Musée Guimet, vol. 69, p. 114.

51. Agradat 'Olam Qatan, in Adolf Jellinek, Beth Hamidrash 5:57-59; cf. Patai, Man and Earth 1:166ff.

52. Encyclopaedia of Islam, 2nd ed., s.v. Inkwān al-Safā (by Y. Marquet).

53. Sayyed Hossein Nasr, An Introduction to Islamic Cosmological Doctrines (Cambridge, Mass.: The Belknap Press of Harvard University Press, 1964), pp. 96, 99, 101-2.

54. Al-Ghazali, Alchemy of Happiness (Albany, N. Y., 1873), pp. 19, 37, and Ghazzali, The Alchemy of Happiness, transl. from the Hindustani by Claud Field (London: John Murray, 1910), p. 28.

55. Cf. Nasr, *ibid.*, p. 99.

56. E. g. Gen. 7:11, and esp. Ex. 20:4, where the component parts of the world are referred to under three categories: "any thing that is in heaven above, or that is in earth below, or that is in the water under the earth." Cf. also "the deep that coucheth beneath" Gen. 49:25; Deut. 33:13. "The deep" figures

repeatedly in biblical poetical imagery, as does the notion that the earth is founded upon the seas or the floods (Ps. 24:2), or that it forms "a circle upon the face of the deep" (Prov. 8:27; cf. 28).

57. Die Religion in Geschichte und Gegenwart, new edition, s.v. Weltbild, 1C Alter Orient.

58. Stith Thompson, Motif Index, A665.2; Die Religion in Geschichte und Gegenwart, *ibid.*, 6:1615; Job 9:6; 26:11; cf. Ps. 104:3,5.

59. Stith Thompson, Motif Index, A657-A657.1; cf. A659.3; A661.0.5.

60. Die Religion, *ibid.*, 6:1612.

61. Cf. Katha-Upanishad VI.1 and Maitri-Upanishad VI.7, as quoted in Die Religion, *ibid.*, 6:1629-30.

62. H. Lubac, "L'arbre cosmique," in Mélanges E. Pouéchal (Lyon, 1945), pp. 191-98; M. Eliade, Traité d'Histoire des Religions (Paris, 1949), par. 95ff.; Die Religion 6:1630.

63. Cf. Stith Thompson, Motif Index, A652-652.4.

64. Cf. Raphael Patai, Man and Temple in Ancient Jewish Myth and Ritual, 2nd ed. (New York:Ktav, 1967), pp. 105-7; ~~idem~~ Hocart, <sup>*ibid.*</sup> Kingship (Oxford, 1927), pp. 176, 191; idem, Kings and Councillors (Cairo, 1936), pp. 220ff.; Eliade, A History, p. 90, and *lit. ibid.*

65. Patai, Man and Temple, pp. 107-39.

66. Josephus Flavius, Antiquities of the Jews 3:7:7.

67. Philo, Life of Moses 3:10.

68. Patai, Man and Temple, pp. 31, 86, 108-13.

69. Jeremias, Babylonisches im Neuen Testament, pp. 62ff.; Patai, Man and Temple, pp. 130-32. Cf. also Louis Ginzberg, The Legends of the Jews (Philadelphia: The Jewish Publication Society of America, 1909-1940), Index, 7:256, s.v. Jerusalem, heavenly.

70. Patai, *loc. cit.*; Ginzberg, *loc. cit.* On the city as the equivalent of the cosmos, I. Hocart, Kings and Councillors, pp. 244-55.



71. Cf. Werner Müller, Die heilige Stadt, Roma quadrata, himmlisches Jerusalem, und die Mythe vom Welt-nabel (Stuttgart: \_\_\_\_\_, 1961), which discusses the cosmic views forming the model for city planning.
72. Eric Burrows, "Some Cosmological Patterns in Babylonian Religion," in S. H. Hooke (ed.), The Labyrinth (London: Society for Promoting Christian Knowledge, 1935), pp. 60-61.
73. Sally Falk Moore, "Descent and Symbolic Filiation," in John Middleton (ed.), Myth and Cosmos: Readings in Mythology and Symbolism (Garden City, N. Y.: The Natural History Press, 1967), pp. 70-71.
74. Eliade, A History, p. 61.
75. Patai, Man and Temple, pp. 27ff., 58, 84-85.
76. Babylonian Talmud, Rosh haShana 27a; Patai, ibid., pp. 69, 98.
77. Mircea Eliade, The Myth of the Eternal Return (Princeton University Press, 1954), p. 78, 80.
78. Eliade, ibid., p. 90.
79. Hocart, Kings and Councillors, p. 202.
80. Patai, Man and Temple, pp. 118-20.
81. E. Burrows, ibid., pp. 45-70; Patai, Man and Temple; Eliade, Myth of the Eternal Return. For recent literature on the subject see Kees W. Bolle, "Cosmology," in the Encyclopedia of Religion (1986).