

WORLDS AND COSMOSES.

Whether we are aware of it or not we have our existence in many different worlds. We live our daily lives within the social world of Man. This is the world in which we work, argue, make friends. Within this social world are the sub-worlds of economics and politics. We are also part of the living world, that is the world inhabited by animals and plants. Although the chemical and atomic world is not directly perceptible to us we observe its effects and can manipulate it as in the use of electricity. On a clear night we may be aware that our planet exists within a vast world of stars. As well as existing in these outer, physical worlds we also have both an individual and a collective psychological world. Beyond we may catch a glimpse of the World of Spirit and the World of the Divine.

We exist in all of these worlds. The worlds we see and the way we see them are a reflection of part of our own nature. For example, in creating the world of computers Man is externalizing and developing a part of the human mind.

For each world there is a part of us which is of the same nature as that world. In the common sense world of hard physical objects we have a solid tangible body. In the molecular world we are a network of chemical reactions. In the business world you are a consumer of goods or a commodity.

Each of these forms is the way we appear to the inhabitants of a particular world. In the world of microscopic life-forms such as bacteria we appear as a vast colony of cells. In the atomic world we appear as collection of atoms. Thus a given being appears differently to the inhabitants of different worlds. In the world of men a cat is a cuddly little pet. In the world of mice a cat is a huge rampaging monster.

Worlds do not exist in isolation. Events in one world may correspond with events occurring in another. For example, the act of switching on an electric light corresponds to a number of events in the invisible atomic realm. The movement of your body corresponds to the movement of a group of atoms. Turning on the light corresponds to the initiation of a flow of electrons. The shining of the light corresponds to the emission of waves of energy from vibrating atoms. The relationship between events in the two worlds is not a causal one. Causality occurs within a given world but not between worlds. The movement of the switch causes the light to shine. In the atomic world the initiation of a flow of electrons causes atoms to vibrate and give out energy. But turning the switch does not cause the electric current. The electric current is caused by changes at the atomic level. These changes correspond to changes observable to the senses. The movement of the switch does not cause the atomic changes leading to current flow. The movement of the switch is identical with those atomic changes. Moving the switch is how certain atomic events appear to our senses.

Although existence is differentiated it remains of a single piece. All existence is interconnected. Within a given world the connection is a causal one, between worlds it is one of correspondence. When an event occurs in any world there is a reverberation through other worlds. But an event in one world does not cause the reverberation through the worlds. Each event is that reverberation.

The relationship is of this nature because the worlds are not spatially separate in the way I am separate from the chair I am sitting on. The various worlds interpenetrate one another. Thus the bodies we use in our everyday lives are composed of atoms and are part of the atomic world. Man's social world is more noticeable in the town. The 'natural' world of ecology is more noticeable in the country. But Man's civilization is not separate from 'nature'. Man's cities are part of life on earth and life exists throughout his cities.

The worlds are not spatially separate but spatial separation is a feature of the organization within certain worlds. In the astronomical world planets orbit at certain measurable distances from the sun. Our sun has a spatial relationship with its neighbouring stars. In our everyday lives we organize the

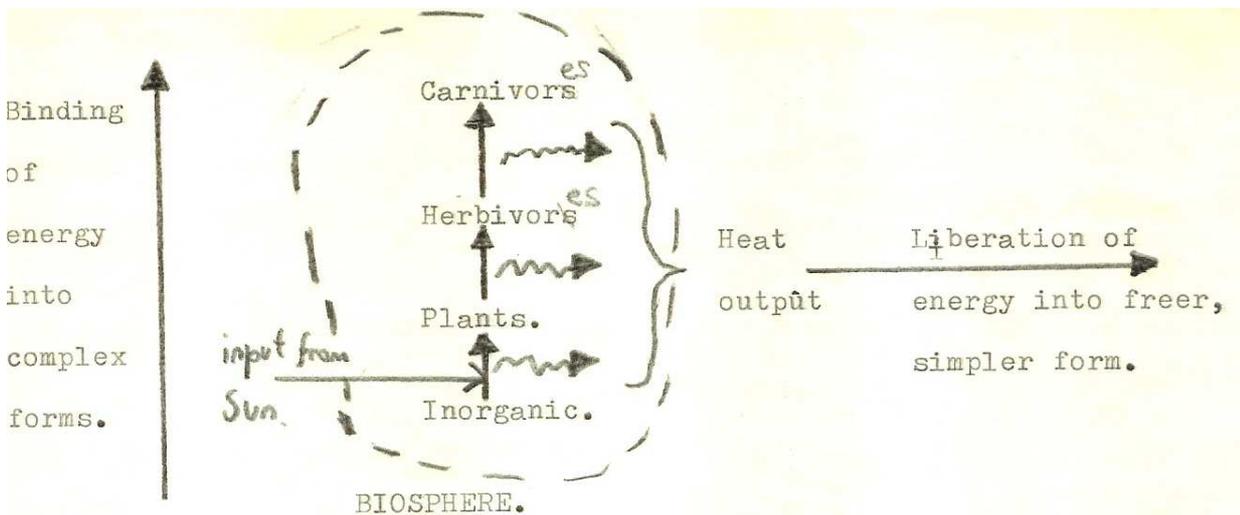
world into separate entities, a table here, a chair over there and so on. We visualize the chemical world along similar lines. We picture its structure in terms of molecules moving relative to one another. The molecular entities are themselves composed of atoms in particular spatial relationships.

Because this way of thinking is so habitual we picture the worlds as being spatially separate. For example, we may see the worlds as different levels like different floors of a building. Alternatively we may see different worlds one within the other like layers of an onion. These are useful models for representing some of the relationships between worlds. But all the worlds coexist within the same space. A man can experience all the worlds without leaving his own house.

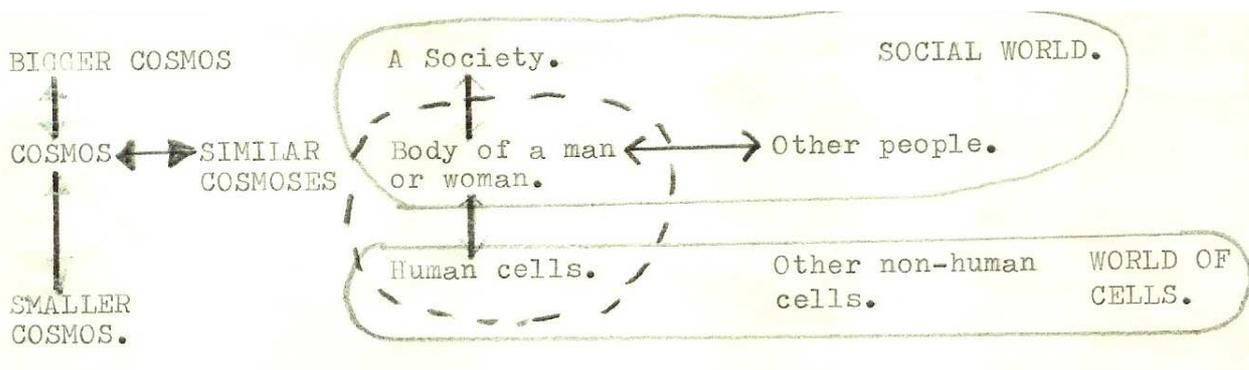
The worlds are created by the binding of energy into greater complexity. For example, the physical energy of our universe has been bound into the world of atoms, the world of molecules and an organic world of increasing complexity.

The worlds are inhabited by cosmoses. A 'cosmos' can be defined as an integrated, self-maintaining whole. A cosmos is a distinct entity which maintains its own existence. The cosmoses inhabiting the economic world are companies, businesses, and commercial organizations. The cosmoses of the political world are parties, states and ideologies. Animals, plants and ecosystems form the cosmoses of the 'living world'. The cosmoses of Man's social world include personalities, families, tribes, societies, clubs, cults and cultures. In each cosmos food is converted, part to simpler, freer energy, part to more bound forms. Thus the human body breaks down food and then incorporates it into its own complex structure. In this process of transformation some of the energy is lost as heat.

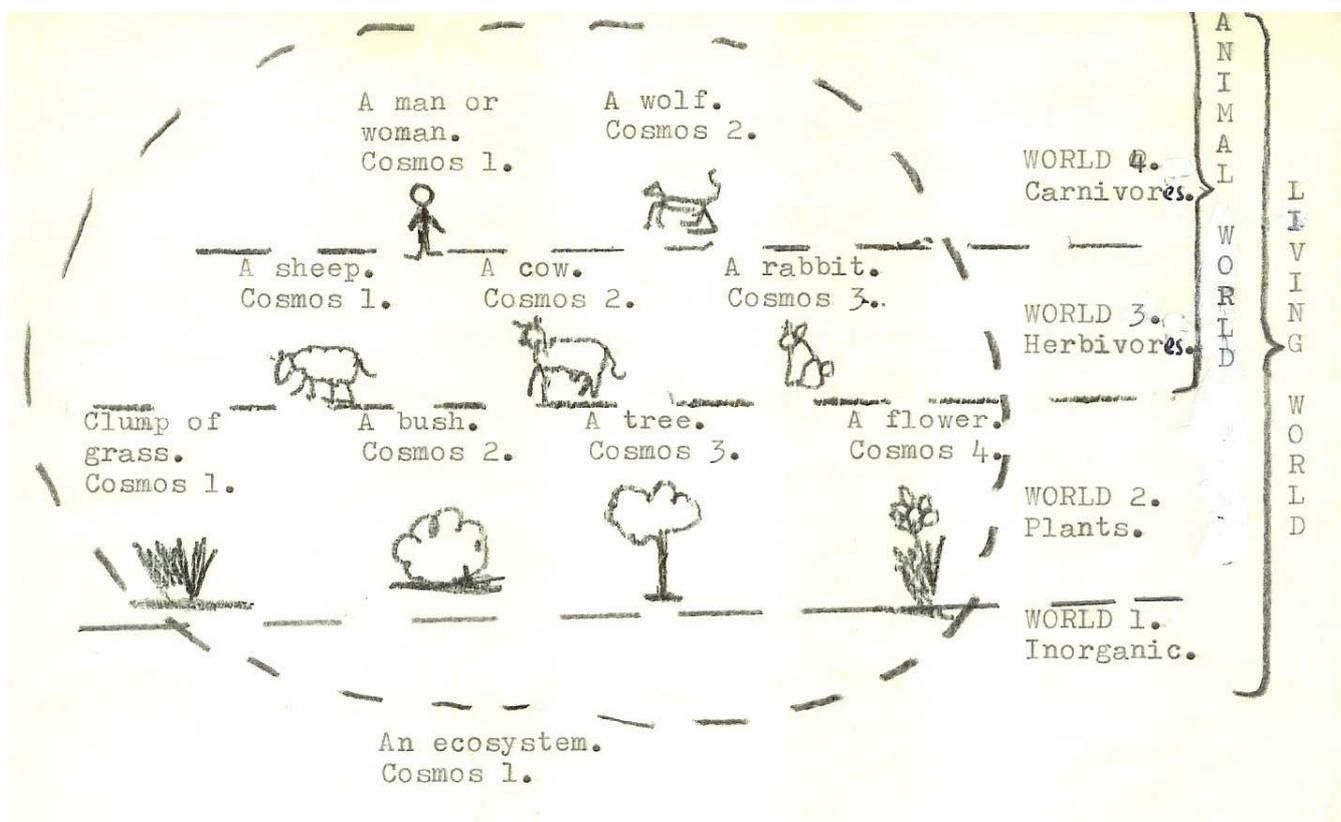
All the life encircling this planet can be seen as a single entity, the Biosphere. Life on earth is a single cosmos powered by energy from our sun. The energy is captured by plants. As the energy is passed through the various ecological levels by animals feeding on plants and each other the energy is locked in greater complexity. At each stage of transformation energy is lost as heat:



The activity of the cosmoses structures the worlds. Cosmoses may form separate structures. For example the cosmos of my body is separate from the cosmos of your body. Some cosmoses may combine to form larger structures. For example, the living cells combine to form complex organisms such as ourselves. We may combine to form societies. Thus each cosmos contains smaller cosmoses, is part of a greater cosmos and exists in a world of similar cosmoses:



Each cosmos acts to maintain its own integrity. This may lead to conflict as in the case of two businesses competing for the same market or two animals competing for the same food source. By striving to keep their own integrity the cosmoses maintain their world and the larger cosmoses of which they are a part. This principle is illustrated in the following example:



In the above example there are four worlds. These are the inorganic world, the world of plants, the world of herbivores (plant eaters), the world of carnivores (animal eaters). These worlds are inhabited by different cosmoses. The carnivorous world is inhabited by carnivorous animals. In this simple example only two cosmoses are shown. Cosmos 1 of this world is a man. Cosmos 2 is a wolf. The herbivorous world is inhabited by plant-eating cosmoses. Three types of herbivore are shown. Cosmos 1 of this world is a sheep, cosmos 2 is a cow, cosmos 3 is a rabbit. The world of plants is inhabited by various plants. Four cosmoses are shown in this world.

The cosmoses of complex worlds feed on cosmoses of simpler worlds. The man and the wolf may eat the sheep, the cow or the rabbit. The sheep, cow and rabbit eat the plants. As mentioned earlier every time energy is transferred between levels energy is lost as heat. That is why there are fewer cosmoses in the complex worlds than in the simple worlds.

In each world conflict between cosmoses maintains the integrity of that world. The plant world is maintained by the striving of plants to grow to their fullest extent, competing for sunlight, water and nutrients. The herbivorous world is maintained by cosmoses such as a man and a wolf striving to maintain their own integrity. In this example all 9 cosmoses constitute a simple ecosystem. This ecosystem is labeled cosmos 1 since it is one of many such ecosystems within the living world.

To summarise the creation of worlds is the unfolding of levels of increasing complexity. These levels are separate in that they are created at different times and insofar as they represent different levels of multiplicity. But at the same time they coexist one within the other. The integrity of worlds is maintained by the activity of cosmoses. Cosmoses may come into conflict but they also combine to form structures. Thus as well as conflict there is interdependence between cosmoses, the principle of ecology. Energy is constantly transformed as it is transferred between cosmoses and bound into complexity. This is the economy of our universe.

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