

RELIGION A PRODUCT OF TERRITORIALITY

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1. The Author's Religious Background

Potential readers of this essay need to be warned about the ideas presented here. Since beliefs can involve strong emotions; there will be some potential readers who will find the ideas presented here objectionable, tasteless, immoral, not true, etc. So that these individuals can throw this manuscript in the waste basket without having to read it through, I present a brief sketch of my own religious background, which indicates the point of view from which I must write.

My father's parents, my grandparents, were deeply religious Methodists of the old-time John Wesley tradition. They tolerated no drinking of alcohol, no smoking of tobacco, no dancing, no gambling, no card playing, and no activity at all that was for pleasure alone. They represented the traditional puritanical American culture that reigned in rural Kentucky from 1850 to 1920. Christmas was not to be celebrated; because John Wesley knew that no one knew precisely when Christ was actually born. My father as a boy hung his stocking from the mantel one Christmas Eve, hoping that Santa Claus might leave him a present; he found horse apples in it the next morning. My grandfather was strict about such things. My grandfather was the pillar and founder of the Methodist Church in Bethel Ridge, as well as the founder of the town of Bethel Ridge itself. Despite his strict Methodist beliefs, my grandfather was a jovial, charming, outgoing, dominant personality. He was the successful owner of a rather large farm. He owned the local general store. He was on the board of directors of four small banks in his area. My grandparents had seven children: Taylor, Maud, Lawrence, Oscar, Edgar (my father), John, and Ned.

Characteristic of the new 20th century generation, my grandparent's children abandoned the strict Methodism of their parents. This occurred because, being the typical enlightend man of the late pioneer

days of rural America, my grandfather believed that education, knowledge and science were the ultimate good (a belief apparently shared by John Wesley). When his children were each about 14 years of age, my grandfather sent them away from home to prep school (internats with room and board, schools to prepare one for college, or highschools). His children thus escaped from the rigid confines and strict beliefs of their home while they were still young. They were able to become "worldly wise". My Uncle Lawrence, my Uncle Oscar, and my father Edgar all obtained doctor's degrees and became university professors. Uncle Taylor became Postmaster of Louisville, Kentucky. Aunt Maud remained unmarried until late in life. She had no children; and I do not know how she spent her life. Uncle John chose to become merely a farmer to the disappointment of the rest of the family. Uncle Ned the baby of the family taught in a technical highschool

My father was raised essentially by his older sister, Maud, as was usual on farms for families with many children. He retained very strong emotional bonds throughout his whole life with his roots in Bethel Ridge, Kentucky. It was probably for this reason that he felt he should become a Methodist minister. Thus, he found himself in the famous Yale University Seminary School in New Haven, Connecticut. Apparently he obtained good grades and advanced to the position of giving sermons on Sunday. This was during World War I. But something suddenly snapped in his head. He found that he no longer believed in God, Jusus Christ, the Bible, heaven, nor any of the many other things that one is supposed to believe as a Methodist minister. He felt that it was wrong to preach things that he himself could not believe (although many ministers do). He became and atheist. He became an enemy of religion in general.

Later in life I once asked him how it was that he became an atheist after going through one of the best and most reputable theological seminaries in the whole world. He said that was the problem; the Yale Seminary was, in fact, too good. When they taught him about all of the conferences convened hundreds of years after Christ's death to decide what should be believed as true and what should be believed as not true, or heresy, and what should be included in the Bible and what should be excluded from the Bible as forbidden books, he realized that the whole religious circus was a product of ordinary humans, who

could not possibly have any "divine insight as to God's intent" - if there were any such things as "divine insight" or "God's intent". My father felt somehow tricked, cheated, and deceived. His parents, everyone in his cultural background, had lied to him. There was no God! He seemed to feel like a child, who, believing in Santa Claus, was told that there is no Santa Claus.

So my father and mother decided to teach their children, which included me, no religion, no mention of a God, no prayers, no Sunday School, no Bible reading, no hell, no angels, no holy ghost, no Christ, no heaven, no nothing! We were free to go to a church if we wanted to, which my sisters actually did on occasion out of curiosity and out of a desire to please friends.

My personality is perhaps best characterized as that of a true scientist. My inner world within the confines of my own skin has its own reality and existence that is never confused with the world external to my own skin. The external world, or nature, is of the utmost interest for me. This external world I share with others. We can investigate together all of the fantastically interesting and seemingly endless things that nature has to offer. To fully experience and enjoy this wonderful external reality I find myself automatically obeying the rules of science. If I am really going to know something about nature, then I have to also know how to be certain that a fact of nature is actually a fact. As a consequence, I automatically shun words, beliefs, and ideas that claim to be about nature, that I am unable to relate to anything I can observe myself in the real physical world.

Once when I was about six years old my mother got me aside and whispered to me, "James Paul, we are atheists! We don't believe in God! Don't tell anyone! Never tell anyone!". She frightened me! I did not understand the word "atheist" nor the word "God". I did not understand who I should not tell; nor why I should not tell; nor why she should whisper. But I did understand that there were people out there, who I had to fear, who had crazy ideas. Eventually I came to understand that I had to fear people who had religion, people who believed in God.

As an adult, who finally learned a little something about religion and religious institutions, I could understand my mother; and I became

more frightened than ever. It seemed to be clear to me then that people who had crazy religious beliefs must themselves be crazy. And religions are loaded with hundreds, if not thousands, of completely crazy beliefs. The word "God" has no objective meaning. "God" cannot be demonstrated as something existing in nature. How can "God" be really an old man with a long white beard formed in man's image? Where does "God" live? Has anyone ever seen "God"? No one has ever been able to show me "God". The word "heaven" also has no objective meaning. Who can take me there to show me that it actually exists in nature? What proof is there that there is "life after death"? Who sees "angels"? I have never seen even one in my whole life. Where does the "holy ghost" sleep at night? Where is "hell"? Why should I fear the "devil"? If they have no objective scientific reality, why bother with such meaningless words, ideas, and beliefs?

Dangerous paranoid schizophrenics, who all too often kill people, are frequently imbued with extreme religious fervor. Crazy religious beliefs are very attractive to the insane mind, which is not capable of distinguishing between religious beliefs and reality. Unusual religious fervor and conviction in the truth of religious ideas can be used as a convenient diagnostic tool to help identify paranoid schizophrenics. The characterization of religious beliefs as "crazy" is, indeed, objectively appropriate.

Religion, as a social institution, is full of threats: You must believe in Jesus Christ or you will go to hell. You have to have faith or you cannot get into heaven. You must protect your eternal "soul", which is particularly scary, if you do not happen to know what a "soul" might be, nor if you might have a "soul" or not. You must pray for "salvation" before it is too late (for what?). You must know the Bible (or else?). You must go to Church (or else?). Etc. Seemingly crazy people with crazy ideas belonging to crazy institutions issuing crazy threats did not allay my childhood fear of religion.

Since many individuals seem to share the same crazy religious beliefs; it is possible to view religion as a serious contagious mental sickness. The disease seems to be transferred from person to person within the family and when large numbers of people crowd together in churches, temples, synagogues, tabernacles, or mosques to participate in

religious rituals. Individuals who come from families without the sickness and who never attend mass religious rituals rarely contract the disease. Since religions persist and are passed on in large social groups; religion may be regarded as a social disease that affects the mind.

If crazy religious beliefs were merely a matter of philosophical interest, there would, of course, be no reason to fear religion. A harmless lunatic, making harmless threats, is, after all, harmless. But crazy religious beliefs are accompanied by social institutions that exert real physical effects upon believers and nonbelievers. Religions have been and remain a constant real physical threat to the survival of the individual. The Inquisition, an established religious institution, burned at the stake, crucified, and tortured hundreds of thousands of presumed heretics and nonbelievers. In some communities if one does not show up in the Methodist Church on Sunday, he may find himself without a job and a livelihood on Monday morning. Hindus and Moslems, showing no respect for the life of an individual, killed each other off by the millions after the recent breakup of the British Empire in India, each trying to force their religion on the other. The Nazis exterminated five million Jews with the assistance of Christians. The Reformation, the split of the Christian Church into Catholics and Protestants in Western Europe, resulted in hundreds of thousands of deaths and atrocities. This bloody conflict continues today in North Ireland. The holy crusades of the middle ages wiped out hundreds of thousands of Christians, who were presumed to have deviant beliefs, both in Western Europe as well as in the Near East. The Spanish Missions in America slaughtered and enslaved the Indian aborigines to destroy their heathen culture and beliefs and to replace it with Christianity. The massive crimes committed against mankind in the name of religion cannot calm the fears of a rational man.

Despite my great fear of religion, I found myself in a Unitarian Church in South Denver in 1963 trembling and dripping with sweat. I was essentially dragged there by my housekeeper - girl friend - and wife to be, who was a Unitarian. Only a business meeting was involved; no religious ideas were presented nor discussed. Having survived this, my first experience in a church at the age of 42, I decided I could

safely attend Unitarian Churches in the future protected by my Unitarian wife. I even became instrumental in founding the Unitarian Fellowship of Rolla Missouri in 1965. I was the Chairman (or Minister) of the Fellowship for one year. I was not obliged to change any of my beliefs. My father claimed that the Unitarians were not a "church" but merely a "debating society". This is not true. It is merely that the Unitarians, like the Quakers, accept an individual's conscience as inviolate.

The Rolla Fellowship spent a number of years inviting ministers and believers of different religions, churches, and confessions to come and address us at our Sunday morning meetings to explain their religion and their religious beliefs. This experience taught me that, just because a man has "crazy beliefs", as defined by objective scientific standards, does not mean the man himself is "crazy", as defined by normal codes of behavior and his ability to think rationally in general. Thus, my original strong emotional fear of my fellow man and his religious institutions due to crazy religious beliefs vanished. I, of course, still retain a healthy fear of the real damage that religion and churches are capable of doing to me personally, to society, and to mankind. But this is now more of an intellectual fear rather than an emotional fear.

Since my religious background was established while growing up in the United States; a few words about religious institutions and their history in the United States are in order. The Christian religion in what is now the United States has always been split into many denominations, each with its own particular religious beliefs. No single Church or denomination has, thus, been able to attain sufficient dominance or power to be able to dictate the religious beliefs of the entire population. The people in America have thus been generally spared the long gruesome history of repression and religious wars found elsewhere in the world. The slaughtering and enslaving of Indians by the Catholic Missions is insignificant in comparison to the mass atrocities committed in the name of religion throughout the two thousand year history of the Catholic Church in Europe. The Catholic Church in America, attracting less than 20 percent of the churchgoers, has been unable to attain the requisite political power to produce any major

conflicts or repression.

In addition, the United States Constitution wisely guarantees the separation of Church and State; so that religious conflict and persecution has remained essentially nonexistent in America. The Methodist Church was the largest denomination in America for many years; but recently the Baptist Church has become the largest denomination. Although there have always been minor local differences and crimes involving religion; there has never been any major or serious large scale religious conflict in the United States. This background of relative religious freedom and tranquillity in the United States is probably responsible for the author having suffered no personal disadvantages for his atheism.

With this introductory Section revealing my religious background it is clear why I, as a scientist, have felt compelled to find a rational explanation for the existence of religion with its crazy religious beliefs. The idea that religion is a disease affecting society as a whole I cannot accept. Religion cannot be a result of any unusual pathology: it must be a social phenomenon that is a product of ordinary natural forces and processes. Religion cannot be a social disease. This same explanation is frequently offered for the cause of war. It is thus often claimed that war with its "war fever" and mass hysteria is the result of a sort of social schizophrenia. I cannot accept this as the explanation for war either. War cannot be the result of any pathology; war must be a result of natural forces and processes that involve man. War cannot be a social disease. My rational scientific explanation for the existence of religion, as well as for war, resides in the territorial behavior of man, as discussed below.

2. Behavior of a Society Is Not Deducible from the Behavior of Individuals

It is frequently easier to find explanations for the overall behavior of a large complex system than for the behavior of the individual components of the system. The need for generalizing is also evident merely to define a word. A word must be defined in a context broader than that implied by the word itself. For example, a "square" is a

plane figure with four equal sides forming four right angles. "Figures" constitute a large general class of things; "plane figures" constitutes a smaller, but still large, general class of things; "sides" is a general property of a large class of plane figures; etc. The definition of the word "square" is, thus, embedded within the larger context of more general things.

A bottle containing gaseous argon is a very large complicated system at the atomic level. Each individual atom has 6 degrees of freedom, 3 for position and 3 for velocity. The bottle may contain of the order of 10^{23} atoms. Thus to specify the system in complete detail it would be necessary to specify the values of 6×10^{23} variables. In contrast, the ideal gas law characterizing the overall average features of the system requires only the specification of 4 variables; thus,

$$pV = nRT, \quad (1)$$

where p is the pressure, V the volume, n is the amount of gas in units of the mole, R is a universal constant, the ideal gas constant, and T is the absolute temperature. This ideal gas law (1), describing the overall mean behavior of the whole huge complicated ensemble of individual atoms, provides us with the useful description of the system that is needed.

It is only within a broad context that religious behavior can be handled scientifically. It is hopeless to try to explain scientifically the religious behavior of societies, their beliefs, their churches, their social institutions, or their rituals in terms of the feelings, motives, and religious beliefs of the individual members of the society. The goal is to explain the reasons for the existence of religion as a social phenomenon involving the society as a whole. Thus, the broader system, involving the total society together with its physical environment in which it exists, needs to be the system in which answers are sought.

The attempt to study social phenomena by examining the behavior of the individuals comprising the society and using theories that are presumed to be valid for the individual generally fail. Thus, for example, the early English economists based their theories of economics upon the behavior of the "selfish man", who was suppose to always seek

his own personal selfish advantage. This traditional "capitalistic" economic theory is still the accepted economic theory today; although it fails miserably when it comes to fitting actually observed economic behavior. The idea that the selfish individual can determine the behavior of life in general has even been proposed to try to explain the direction of evolution, as presented in Dawkins' (1976) silly little book "The Selfish Gene". The general economic variables characterizing the society as a whole, such as the volume of money, the total rate of energy expenditure, or the total rate of food consumption, need to be predicted or explained in the larger context of the society plus the physical system in which the society exists. What is the area occupied? What is the climate? What are the physical means of production available? Etc.? The overriding fundamental law for the long-time average economic behavior of a society as a whole is given by:

$$\left\{ \begin{array}{l} \text{Goods will be generated and distributed such as to maximize} \\ \text{the total time-average biomass (or ecomass).} \end{array} \right. \quad (2)$$

The biomass is the total mass of living humans, plants, and animals present on the area involved. (The ecomass includes, in addition, the equivalent mass of thermodynamically ordered compounds of low entropy in machines, structures, and detritus.) This law is one of many corollaries that can be derived from the primary law for ordering processes in nature (4) or (7) below, that is applicable to all large complicated systems. This economic law (2) permits one to predict the typical, or usual, or time-average mean economic behavior of a society as a whole. "Selfishness" or "altruism" are egocentric anthropomorphic ideas that have no actual objective scientific meaning nor value. This law of economics (2) transcends the personal motives and desires of the individuals making up the society. One can predict what the typical individual will do on-the-average without having to know why at the personal level he does it.

Similarly, for example, the sexual behavior of a society as a whole cannot be adequately predicted nor explained by examining the individuals in the society. The appropriate basic law is:

$$\left\{ \begin{array}{l} \text{Sexual behavior of a society will be such as to maximize the} \\ \text{time-average biomass (or ecomass).} \end{array} \right. \quad (3)$$

This law can then, for example, be used to predict a maximum or increased rate of copulation following a cataclysmic loss of population or in case of a population far less than can be physically sustained. And this law then predicts a minimum or decreased rate of copulation for an over population in terms of what can be physically sustained. The huge variety of conditions and complicated sexual taboos imposed by different societies upon the individual members of the society will all function so as to produce the results predicted by the sexual law (3). No matter what the personal sexual desires, feelings, or rational reflections of the individual members of the society might be, the end result will be the same as that given by the sexual law (3). A study of the individual can reveal little about the general time-average sexual behavior of the society as a whole.

The power of global ideas for ecology and the study of life in general were recognized in the early research of Lotka (1924). His book "Elements of Physical Biology" can be still read today with profit.

3. The Primary Law for Ordering Processes in Nature

The primary law for ordering processes in nature states:

$$\left\{ \begin{array}{l} \text{Statistical thermodynamic systems open to deep space with} \\ \text{temperatures greater than } 2.7^{\circ}\text{K proceed toward states of} \\ \text{lower entropy.} \end{array} \right. \quad (4)$$

This law, which can be applied to the birth of stars, is important in the study of the universe as a whole, or cosmology (Wesley 1991, 1996). Since life involves entropy reducing processes in statistical thermodynamic systems open to deep space with temperatures greater than 2.7°K ; this primary law (4) can be used to help predict the likelihood of life on the various planets in the solar system (Wesley 1967). This primary law (4) has many important corollaries, such as (2) and (3) above. All statistical thermodynamic ordering processes on the Earth's surface are subject to this primary law (4). In conformity with this primary law (4) the Earth's surface has evolved over geologic time toward more thermodynamic order, or lower entropy, under the action of sunlight (Wesley, 1989). This primary law (4) and its corollaries are most important in the study of ecology. This primary law for

ordering processes in nature (4) is the guiding physical principle behind the material presented in the book "Ecophysics" (Wesley 1974a); although this law is not explicitly stated in the book. Ecophysics is the study of ecology using physics; just as biophysics is the study of biology using physics.

The elements in the compounds in living organisms have a lower entropy than the same elements in the environment: so that life, that must obtain these elements from the nonliving environment, represents an entropy reducing process. This thermodynamic ordering, or entropy reduction, is produced by the absorption of low entropy dS solar energy dQ at an absolute temperature T of about 6000°K , where $dS = dQ/T$, that is reradiated into deep space as high entropy thermal energy at the absolute temperature of the Earth's surface of about 273°K . The consequent entropy production drives the ordering processes on the Earth's surface. In particular, the Earth's surface is a statistical thermodynamic system open to deep space with a temperature greater than 2.7°K ; so it fulfills the conditions for the primary law (4) to be valid. Thus, the Earth's surface must proceed toward states of higher order or lower entropy. Since life on the Earth is involved in this entropy reduction; and since more biomass means more thermodynamic order, or less entropy; an important corollary of the primary law (4) involving life is:

| The biosphere and ecosystems tend toward maximum biomass. | (5)

This corollary (5), when applied to the Earth over geologic times yields the additional important corollary:

| The direction of the evolution of life is such as to | (6)
| increase the biomass of the biosphere and ecosystems. |

(Wesley 1966, 1974a, 1989, 1991).

The corollary (5), when applied to humans as part of the biosphere and ecosystems, yields the additional corollary:

| The time-average behavior of humans en mass is such as to | (7)
| maintain and increase the biomass (or ecomass) of the |
| ecosystem. |

This corollary (7) then yields the corollary (2) for economic behavior

presented above.

4. Territoriality

Extremely important behavior of animals involves territoriality (Wesley 1974b, Lorenz 1966, Ardrey 1966, Tinbergen 1966, and Wynne-Edwards 1965). It follows from corollary (5) of the primary law (4) that individuals or social units of a particular species will distribute themselves over a large area such as to maximize the biomass on the area. Sunlight, that provides the necessary energy for life, is available only as so much energy per unit time per unit area. And all of the other factors that are also necessary for life for a particular species, for an individual organism, or for a social unit are also provided per unit area. Thus, an individual organism or a social unit must occupy a sufficiently large, or minimum, territory (or have access to the products produced on a sufficiently large, or minimum, territory) to survive. A law of territoriality, a corollary of the primary law (4), then says:

| Individuals or social units of a particular species will | (8)
| distribute themselves over an area suitable for life such |
| that each occupies a minimum territory for survival. |

In particular, the greatest number or population of individuals or social units, and thus the greatest biomass, on an available area is attained when each individual or social unit occupies a minimum territory for survival.

Territorial behavior involves the various mechanisms that assures that each individual or social unit occupies the minimum territory for survival. Of course, it can happen that a population density may be temporarily too low for all minimum territories to be occupied or for each territory to be of the minimum size for survival. But the maximization of the time-average biomass means that each species has the capacity to reproduce at a rate many times that necessary to maintain an equilibrium population; so all minimum territories become occupied (the equilibrium situation) in the shortest time possible.

Contrary to Wynne-Edwards (1965), Allee (1938), Lorenz (1966), and Tinbergen (1966), the apportionment of minimum territories among

competing individuals or social units of a species cannot be achieved by ritual behavior alone. Ritual mechanisms can only be sustained when the rituals are occasionally confirmed by actual physical conflict involving violence and possible death (Wesley 1974b). Members of the same species, requiring precisely the same food and the same size minimum territory to survive, are in a life and death struggle with each other for survival. Competition between members of different species (where a predator-prey or a parasitic relationship is not involved) is essentially nonexistent as compared with the competition between members of the same species.

Defending a minimum territory for survival can require a very large fraction of the energy and time an animal has available to expend. The phenomenon is so important that evolution has selected and thereby equipped animals with all sorts of special glands to produce pheromones to be deposited around or over a territory as evidence that the territory is currently occupied. And all sorts of ritual behavior between individuals or social units, occupying neighboring territories, have also evolved to ensure an even distribution and thus maximum number of animals over an available area. For such ritual behavior to be evolutionarily selected, the losers in territorial conflicts must be occasionally killed or lose their lives.

Territoriality is the cause of war. The territorial behavior of man is dictated by precisely the same principles as territoriality for animals in general. Man, being a social animal, holds a territory for the social unit or society against possible encroachments of neighboring social units or groups. Although most territorial conflicts between neighboring primitive villages, clans, or tribes, or between neighboring countries are usually resolved peacefully by "treaties"; occasionally territorial conflicts, involving physical violence, or war, with the deaths of many individual humans do occur. This precise phenomenon may also be seen with ants. Territories held by different ant nests are usually distinguished and retained without violence. But on occasion an ant war occurs with the deaths of many thousands of individual ants. The territorial cause of war and the territorial behavior of man is discussed elsewhere (Wesley 1974b, pp. 273-283).

5. Social Bonds

For species that live as individuals no social bonds are necessary, except the limited cooperation with members of the opposite sex to produce progeny. Often a male and a female pair of a species establish a bond to cooperate in the raising of young, as is the case with birds. In this case the bond is established and maintained by various grooming behaviors, by ritualistic bodily movements or dancing, by visual displays, by pheromones, and by food offerings, that identify the partner and indicate a readiness to cooperate.

For a society involving many individual animals the bonds must extend throughout the social unit or society. For behavior that requires no simultaneous cooperation between many members of the society acting in concert, social bonds are essentially a network of bonds between two individual members of the society that radiate out from (and into) each individual member. These individual two-member bonds may be viewed as arising mainly from the need for two members to meet and to transact some sort of business with each other. The bonds within a family radiate weakly from members of the immediate family out to the society as a whole; and they are thus relative weaker in establishing social cohesion between all members of the society as a whole.

For activities that require many individuals acting together in concert the bonding to yield the cooperation necessary is not the same as the two-member bonding nor family bonding. A society, such as a primitive village of a few hundred individuals, must act together simultaneously to repel an attack by neighboring villages. Or the society may have to act together simultaneously as a unit to hunt animals for food by driving them past the slayer, by forming a gauntlet for the prey to run, by encircling the prey, or by simultaneously attacking a very large or dangerous prey. A society may have to eat together simultaneously to obtain full benefit from a freshly killed large prey before it spoils. A nomadic society must all move together at the same time from an area that has become overgrazed to a more fruitful area. The bonding for these activities is established by the simultaneous presence of all or many members of the society. Mass rituals, mass dancing, mass singing, mass marching, mass attendance at theater spectacles or at sports events, and mass attendance at

religious ceremonies are all instrumental in establishing social bonds for simultaneous action by many members of the society.

Religion generally involves rituals with large assemblies of individual members of the society. The simultaneous presence of many individual members of the society is required. The role of religion must therefore be primarily involved with bonding together many individuals, who must carry out activities requiring the simultaneous cooperation of many or all of the members of the society. Religion is not particularly involved with two-member bonding. The idea that religion determines morals, or the interpersonal relationship between individual members of the society is false. Interpersonal behavior between individuals, two-member bonding, is observed to be essentially the same for believers as well as for nonbelievers in any particular religion. And the morals for interpersonal relationships is essentially the same for all societies, no matter what religion is practised. Although religious institutions may take on extraneous functions, such as solemnizing and recording marriages; the involvement with such individual two-member bonding is not the primary function of religion.

From the primary law (4) and its corollaries, such as (5), social bonds of any type or origin must exist to cause a society to help maximize the time-average biomass sustained over a large area. The question then arises: How does religion, being primarily involved with the behavior of large groups of individuals acting in concert, help to maintain and maximize the biomass of the ecosystem? A scientific answer to the question of why religions exist must lie in the ecophysiological role of religion.

It is often claimed that religions exist to satisfy man's thirst to know the answers to certain metaphysical questions, such as: Why do I exist? Why does the universe exist? What happens to me after I die? What is the ultimate cause for everything? How did the universe come into being? Etc.? These questions, while of possible interest for an individual's internal subjective self, have no scientific answers nor even any scientific content. The "answers" supplied by religions to these sort of metaphysical questions constitute merely some of the crazy beliefs (as discussed below in Section 8). There is no evidence that an individual man needs such answers, even if he were interested in the questions. It should be self evident that no important social

activity nor important social institutions can be claimed to exist merely due to the presumed idle intellectual curiosity of individuals in certain meaningless metaphysical questions. The only possible objective scientific answer to the question as to why religion exists must be sought in the role religion plays in the society such as to help maximize the biomass (or ecomass) on the total area occupied by the social unit and neighboring social units.

6. The Role of Religion in War

Historically religions as the apparent direct or major contributing cause of conflict and war is extensively documented in thousands of examples of conflicts and wars. Current bloody conflicts between religious groups can be observed today in former Yugoslavia between Moslems and Christians, in Israel and neighborhood between Jews and Moslems, in North Ireland between Catholics and Protestants, in India between Moslems and Hindus, in Afghanistan between fundamentalist Moslems and liberal Moslems, and in Algeria also between fundamentalist Moslems and liberal Moslems.

But religion is not the real underlying cause of these conflicts and wars. The real cause for these conflicts and wars is territoriality. The compelling need to possess sufficient territory to survive is the real powerful motivation for conflict and war. Religion's role during a war is primarily to help differentiate the parties to a conflict, one party from the other, the we from the they, the good guys from the bad guys. Although religion helps to make war possible by bonding together all of the members of a society; so they are prepared to act together in concert to fight a war; the real cause of war is territoriality. It clearly makes no difference whether a man believes in Christianity, or Mohammedism, or Hinduism, or Judaism, when the physical aspects of conflict and war are considered. A man fights no matter what his religion might be. Thus, religion cannot be the actual underlying physical cause of war.

The role of religion to make it possible to distinguish the members of the social group, the we, from members of all neighboring social groups, the they, who are potential enemies in case of war, remains in times of peace. Religion preserves the awareness of the we in a

society as opposed to the they. The society thereby remains ready at any time to distinguish the we from the they. The society is thus prepared to act immediately and cohesively to effectively fight any actual physical war that might arise. Religion, by always reminding the society of the existence of the we and the potential hostile they, sets the society in a perpetual state of fear and anxiety of an evil enemy that may materialize at any instant.

Religion helps to guide and control man's evolutionarily selected primitive instincts to kill his competitors. Religion teaches that "Thou shalt not kill!" members of ones own social group, the we. And one is only suppose to kill members of other neighboring social groups, the they, when it is formally ritualistically approved by the whole social group, the we. Religion thus helps the individual to override the taboo "Thou shalt not kill!" in times of war; so the individual can kill members of the they. In addition, religion helps the individual to override his own self-survival instinct to allow him to sacrifice his own life for the survival of the remaining members of the social group. (This may be the origin of the peculiar idea that there is a "life after death" for the individual. In the act of sacrificing his life for the social group, the individual might view his own personal existence as continuing on after his death in the continuing life of the social group (?).)

7. The Struggle of Religion Against Nonbelievers

Religions are preoccupied with a presumed struggle against the evil nonbelievers, the atheists, the heathens, the heretics, the witches those without faith, the satan worshippers, the sinners, the agnostics, and the free thinkers. Church members are admonished almost every Sunday by their preachers to watch out for such nonbelievers with their aberrant beliefs calculated to lead the true believer into sin and damnation. The strange aspect of this presumed struggle is that ordinarily no nonbelievers seem to exist. Ordinarily one religion dominates in a particular area to such an extent that it is virtually impossible to find a nonbeliever.

This phantom struggle impresses upon the minds of the believers that there are always others out there somewhere, the they, who are

ready at any moment to do the true believer, the we, very serious harm. Religion constantly drills into the minds of the believers that men can be, and should be, always identified as either a member of the we or a member of the they, the virtuous or the sinner, the moral or the immoral, the good or the evil, the believer or the nonbeliever, those with faith or those without faith, the good guy or the bad guy, the God fearing or the atheist, the religious or the heathen, etc. The primary role of religion is to instill in the minds of the believers a conviction that all men can be thus strictly dichotomized into two such simple-minded catagories, either the we or the they. Such a strict dichotomization by animals of other animals as either the we or the they is a characteristic of all social animals living as separate social units, each occupying its own territory. Primitive men, living in one village, occupying its own territory, the we, are strictly differentiated from the members of other neighboring villages, occupying other territories, the they. The preoccupation of religion to preserve an awareness of the distinction between the we and the they is thus clear evidence for the territorial origin of religion. Like territoriality in general, religions exist to help distribute human social groups over a large area such as to maximimize the biomass.

It may be noted that religion's preoccupation with the we and the they also serves to force the believers to behave in ways appropriate for the social group. If a believer refuses to sacrifice himself for the benefit of the group, when it is appropriate, he may be banished from the group, he may be classified as one of the hated they, and he may find himself without a livelihood, or he may be even killed by his own social group.

The fact that the hated they may sometimes actually live physically on precisely the same territory as the we does not mean that territoriality is not involved. Members of a neighboring enemy territory, who have managed to infiltrate deep inside of the frienly home territory, are to be vigorously hunted down, identified, and exterminated. For example, the Jews in Germany were classified by the Christian Nazis as non-Germans. Jews were thus regarded as non-German aliens, members of the they, who were not to share the same rights and priviledges as the Germans, the we. The Jews were hunted down, identified and exterminated; 500,000 Jews living in Germany were thereby killed before

and during World War II. It was a matter of indifference that the Jews had lived in Germany for over 500 years; the phenomenon leading to their extermination was, never-the-less, a result of the territorial behavior of man.

8. Crazy Religious Beliefs to Distinguish the We from the They

A huge number of mechanisms can be found in nature whereby individual animals can be distinguished one from another; or social groups can be distinguished one from another. Size, bodily structure, coloration, and scent can be used to identify a particular individual from all others. Each ant nest has its own scent to distinguish its members from the members of all other nests of the same species. All social insects use such pheromones to distinguish the we from the they. Primitive men use tattoos, bodily adornments, body paint, and special clothing to permit the ready recognition of those living in the home village and on the home territory, the we, from those living in neighboring villages on neighboring territories, the they.

In addition to these devices man uses religious beliefs to effectively distinguish the we from the they. The we have their own particular religious beliefs; while the they have other different religious beliefs. The Spartans worshipped different gods than the Athenians. In order for beliefs to distinguish the we from the they, different beliefs must be possible. For everyday ordinary beliefs regarding observations in nature everyone believes precisely the same. Mountains are large. Mice are small. Birds fly; and dogs run. One must eat to still ones hunger. The sun rises every morning. Etc. Obviously, such everyday beliefs, that everyone accepts as true, cannot be used to distinguish between two potentially hostile social groups. A belief that really distinguishes a member of the in group must be a belief that is unique to this group. No one, who is not a member of the in group, can have this belief. Such a unique belief cannot be a scientific belief; since science demands that all reasonable men upon examining the same empirical evidence will believe the same, quite independent of their membership in any particular social group. A religious belief, that can distinguish, must be so outlandish and so absurd that no sane man, who has not been indoctrinated or brain-washed,

will accept such a belief as true. The nonbeliever, who has not been indoctrinated, is thereby easily distinguished as one of the they. In order to best function to distinguish the we from the they religious beliefs must be so highly individual as to be completely crazy. Such beliefs must be completely divorced from reality or they might possibly accidentally be accepted by someone who is not a member of the we.

Only Catholic Christians believe that "Mother Mary ascended bodily into heaven", as solemnly decreed by the Catholic Church in Rome in the 1950's. Most non-Christians have never even heard of "Mother Mary" nor know what "heaven" might be, having never been there to see it. They do not know that one has to "ascend" to get into "heaven". And how else can anyone ascend anywhere except "bodily"? The whole belief in Mother Mary ascending bodily into heaven is clearly crazy. Baptists believe that one must be baptized (whatever this might involve?) or ones soul (whatever that might be?) will be damned (whoever does the damning?) to hell (wherever this presumably unpleasant place might be?) forever! A Hindu would not have the slightest shimmer of an idea about this obviously crazy belief of a Baptist. A Hindu has his own crazy religious beliefs. The world abounds with a seemingly endless variety of crazy religious beliefs. Being "crazy" allows for an unlimited variety of beliefs, which can then be conveniently chosen to distinguish optimally the we from the they.

9. How Religious Beliefs Become Accepted

The role of religion to distinguish the we from the they, being based upon territorial instincts and drives, represents a powerful social force. The drastic physical consequences resulting from religious conflicts in terms of death and destruction should make it clear that religion and religious beliefs should not be treated lightly. To cavalierly reject all religious beliefs as simply "crazy" would seem to be a luxury that only a total nonbeliever, a complete outsider, like the author, can enjoy. For the man, who cherishes his religious beliefs as true, the label "crazy" is simply heresy. No amount of rational argumentation can induce a true believer to abandon one of his most cherished religious beliefs. As taught in the churches, synagogues, and mosques, a believer must have faith. The believer is thus commanded to accept an emotional conviction of the truth of a

religious belief no matter what rational argument is presented to show that it is not true or that it has no basis in reality.

Since a rational scientific outsider readily sees these religious beliefs as "crazy"; how can religions induce an individual to abandon his individual native reasoning capacity to accept such insane religious beliefs? In order to override an individual's natural native intellectual capacity to think logically and rationally for himself religions must employ a large variety of powerful and drastic strategies.

These strategies are reinforced by the instinctive needs of the individual himself to belong to a social group. The individual's instinctive need to conform and to belong makes it easier for him to accept crazy religious beliefs forced upon him by his social group. In a certain sense the individual's need to conform is paid for by a certain loss of the individual's intellectual integrity. In particular the needs of the society as a whole can demand sacrifices from its individual members. The loss of an individual's ability to think clearly when it comes to religious beliefs should thus not seem strange. For example, a soldier may sacrifice his own life in battle against an enemy to defend his own social group. The soldier's self-survival instincts are in part overridden by his religious convictions. However, an individual is not being rational when he sacrifices his own life.

If evolutionary selection is the measure for what is "good" and "rational", then religion, together with its crazy beliefs, must be "good" and "rational". Societies with religion exist and have been selected as the fittest in the struggle for territorial survival. In this broad global context one can view an individual's crazy religious beliefs as contributing to the survival of mankind and thus as "rational".

Religions must brain-wash individuals into accepting crazy religious beliefs. It is, of course, not absolutely necessary that any particular individual truly believes; it is sufficient if such a nonbeliever claims to believe and behaves as though he believes. Intensive religious indoctrination from birth on is the generally accepted brain-washing strategy employed. Brain-washing at a tender age before an individual has had the opportunity to develop his full intellectual capacity to think for himself is very effective. At an early age children believe what their parents tell them to believe. Seldom does anyone adopt

beliefs later in life that differ from their parent's beliefs. (This appears to be an aspect of cultural heritage that is evolutionarily selected to make it easy for the beliefs of one generation to be passed on to the next, beliefs that are effective for survival of the species. The ability of young children to believe their parents and to retain these beliefs into adulthood has thus apparently great survival value for the species.) The author presents no exception; I believe precisely as my parents taught me to believe when I was young. Most Catholics can trace their religious beliefs to what they were taught when young by their Catholic parents. And so it is that all religions are passed down from one generation to the next.

The author has had personal experience with the effectiveness of brain-washing with the very young gullible immature mind. My parents told me many times from the time I was about 18 months old that there was a Santa Claus, who brought me gifts on Christmas Eve. When in the first grade and some of my fellow pupils claimed that there was no Santa Claus and that my parents were simply lying to me, I rejected such ideas as firmly as any good Christian rejecting heresy. Even my 14 month older brother was unable to shake my faith. Finally, on my seventh birthday my Mother informed me that there was no Santa Claus (to the delight of my older brother). I was deeply shocked. My whole world seemed to suddenly fall apart. It took me some months before I could again view the world with equanimity. I would probably be still a believer in Santa Claus to this day if my Mother had not disillusioned me on my seventh birthday. Children who have been brain-washed into accepting crazy religious beliefs, who have had no one to disillusion them, retain their crazy religious beliefs tenaciously into adulthood.

Religions brain-wash their members by assembling large groups together on every Sunday to hear the same religious beliefs presented as holy truths. The constant repetition of the same dogmas serves to make even the craziest ideas appear normal and acceptable. In a large group, where everyone appears to accept the truth of what they are told, the individual, not wishing to be different, is thereby intimidated into also accepting what they are told as the truth. All sorts of religious ceremonies and rituals involving many individual members

serve to condition the members into accepting and believing the crazy beliefs characterizing the religion.

Religions also frequently force the acceptance of crazy religious beliefs by threats of excommunication, the removal of a man's livelihood, banishment, imprisonment, torture, enslavement, or death by burning at the stake. And these threats are, in fact, carried out on a vast scale on many occasions, resulting in hundreds of thousands and millions of deaths. "Religious persecution" is an amply documented historical fact. One must believe, or else!

10. Religion, the Military, and Government

Religion is only one aspect of human territoriality. Physical territorial conflicts are carried out by the military, that is especially trained and equipped with weapons for war. The orders for territorial wars are usually given by governments and leaders who are not directly involved with religion per se. Human societies are structured to have presumed specialists in different areas of activity. Even primitive villages have different men in different roles, each specializing in his own area. The priest, the warrior, and the leader are generally different men. The preservation of territory or the acquisition of new territory involves many social institutions, professions, and specialists, all of which work toward the same goal. The role of religion is primarily to prepare and maintain the society in a cohesive state that permits it to act quickly as a unit to defend territory or to acquire new territory.

It may happen that a religious institution, a church, such as the Catholic Church, retains its own armies and carries out its own territorial wars. And it may also happen that the roles of government and religion become combined. Copernicus, for example, as a Roman Catholic Cardinal, was for many years the ruler of Poland. Constantine, as Roman emperor, declared himself to be the Pope of the Christian Church, thereby combining religion with government. The Japanese Emperor, as the son of God, is supposed to combine religion with government. Political movements, such as Communism in Russia and in China, can frequently take on the character and the role of religion. But military and governmental activities may be ordinarily distinguished from

religious activities. It is thus possible to consider religion as a phenomenon separate from other human territorial activities.

11. Does Religion Do Good?

Religion, as ordinarily defined or regarded, has many facets. Many of these facets have little or nothing to do with territoriality. Religion for some is doing good works, such as healing the sick, establishing homes for orphans, feeding the starving, and aiding the poor. Religion for others is simply private meditation, prayer, and a life of seclusion from the rest of the world. Religion is discussed here only in terms of its primary role for the society as a whole. The many secondary aspects of religion at the level of the individual, which may also be of interest, are not considered here.

"Religion" is characterized here as the institutions, the rituals, and the beliefs that bond together the members of a social group occupying a territory by providing devices to distinguish members of the group, the we from the members of other social groups occupying neighboring territories, the they so that the we are to be accepted, protected, loved and nurtured, while the they are to be rejected, attacked, hated, and exterminated. The idea that religion teaches its believers to accept, protect, love, and nurture the we, the members of the social group is thus true. But it is not the whole truth. Religions also teaches its believers to reject, attack, hate, and exterminate the they, the members of other social groups on other neighboring territories. Those who choose to see only the we and are blind to the they can view religion as something other than what religion really is.

Since religion, as well as war, in its territorial role helps to maximize the amount of life on a large area; it may be viewed as doing "good", if maximizing life is "good". Since religion helps to make war possible; religion may be viewed as "bad", if war is "bad". Thus, the question, "Does religion do good?" does not permit a definitive answer. It depends upon what aspect of religion is being considered and what is to be regarded as "good" and what is to be regarded as "bad". Scientifically such subjective value judgements as "good" and "bad" are not admissible. Religion and war are neither "good" nor

"bad"; they are simply phenomena that exist in nature.

Before ending this discussion of "good" and "bad", it may be noted that territorial wars and religious activity would be presumably reduced if the human population were reduced. If, using sensible strategies of birth control, the human world population were to be reduced to a few percent of its current level, the need for territorial wars and religion would be presumably correspondingly reduced. Moreover, man's serious problems with the pollution and destruction of his environment would be thereby solved. The "good" that might be achieved by population control with a drastic reduction of the current population is thus self evident. Primitive societies living on small islands practise birth control by using many devices, including infanticide, to keep the population in harmony with the environment. It would thus seem that modern man might, in principle, achieve a sensible birth control program to obtain a much smaller stable world population in harmony with the environment. Unfortunately, such a program would seem to be in conflict with the primary law of nature (4) and its many corollaries that seem to say that the world human population must always increase when physically possible, and humans cannot control this inevitable process (the Malthusian principle). If the world society were to embark upon such a birth control program, it must realize that relevant natural laws must be considered and that the problems to be overcome seem to be insurmountable.

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