

CHAPTER FIVE

LEGENDS AND MIRACLES

Settled temporarily by the Holy Mountain, Israel awaits miracles. Moses and no one else must provide them. The Mountain is very active - smoke and fire abound. The scene is obscured by the continued high dusty and turbulent sky. Moses ascends the Mountain and gets initial instructions regarding preparation of a covenant. Moses returns and receives the assurances of the people: "All that Yahweh has spoken we will do." [1] Yahweh, hearing this, commands Israel to be present at the foot of the mountain on the third day of their consecration.

The third day broke with horrendous thunder, lightning, clouds, and trumpet blasts upon the mountain. The people assembled as instructed. Yahweh called up Moses and Aaron and delivered the Ten Commandments to the multitude. Apparently the people could not make out his words with all the thunderings, lightnings, the sound of the trumpets and the mountain smoking, so they said to Moses: "You speak to us and we will hear; but let not God speak to us, lest we die." [2] So Moses drew near again to the "thick darkness" where Yahweh was and he received many ordinances.

Moses is told to invite the leaders of the people up to see Yahweh; do not let the people come up. Before doing so, Moses sacrificed oxen and sprinkled their blood over the people as they gave their pledge to the Covenant.

He brings the seventy elders and three priests - Aaron and his sons (later to be accidentally electrocuted) - up to a marvelous plateau, a table or pavement of sapphire stone, evidencing prolonged electrical discharging, raising a heat that glazed the rock, perhaps metamorphosing it [3]. There "they saw the God of Israel;" it is repeated: "They beheld God." [4] Not so, the exegetes say, Yahweh is invisible; *ergo* they could not have seen him; never mind the explicit language.

Nonetheless Moses is inspired and hears Yahweh calling to him. He tells the elders to await him and, during his absence, to refer any problems to his adjutants, Aaron and Hur. Joshua, who is called his servant, goes part of the way up, and halts. Moses waits because of a dangerous cloud that hovers over the summit. On the seventh day, Yahweh calls, and Moses enters the cloud. All Israel, meanwhile, can see from below "the glory of Yahweh... like a devouring fire on top of the mountain." [5]

After forty days and nights, Moses descends from the mountain with the laws, written by Yahweh on two stone tablets. Awaiting Moses is a full scale revolution - the Golden Calf. He destroys the tablets in shame and anger. He suppresses the revolt ruthlessly. He begs Yahweh for another chance. Again he goes up the Holy Mountain. This time, Yahweh admonishes him to hide himself from His person, so Moses enters a crevasse, a cleft, a kind of cave, and there crouches as far in as possible ("bows low") when Yahweh's brilliance passes by him. Not even a pinprick of light penetrated his cave, says a legend, or else he would have been consumed when Yahweh and his retinue passed by; still the intensity of illumination was such that "he caught the reflection of it so that from its radiance his face began to shine." [6]

When he descends, the people recoil from him in fright and awe. His countenance is radiant. He has a halo - the first halo, and the only one on earth - Neher states enthusiastically. Others give Moses horns on this occasion. Michelangelo's great conception of Moses depicts him with horns. Why didn't the Jews and Catholics complain of this?

Daiches presents an unconvincing etymological argument [7]. All the medieval and Renaissance scholars and churchmen, led astray by St. Jerome, read a word wrong: *Karen* (H) is a verb meaning "shone" or "gave forth rays of light"; the noun *keren* means "horn" or ray of light" (Ex. 34:35). He objects to deriving the latter from the former word. But the words are obviously related; Hebrew vowels are notably unreliable in sounding words (as when a preference is sought between "Jehovah" and "Yahweh"); the earliest etymologies are often indefinite and

partial. Perhaps something with connotations of both "horn" and "ray of light" may be intended, inasmuch as the phenomenon was capable of giving both impressions, and people were quite sensitive to "horns" in this aftermath of the revolt of the Golden Calf.

Ruth Mellinkoffs enchanting study of *The Horned Moses* concludes that St. Jerome's translation of Exodus 34:29 as 'horned' appears "in keeping with the context and meaning of 'horned' in the ancient world as well as the metaphorical meaning of 'horn' and 'horned' in the Bible. It meant strength, honor, victory, power, divinity, kingship, and salvation..." The scholar-theologians of the Church saw them as "horns of light, or light emanating in the manner of a horn" - an interpretation first suggested by Rashi, the famous eleventh-century Jewish commentator.[8]

Moses has unusual ways of conducting, storing, and discharging electricity. Or was there so much of a voltage gradient as he descended that he discharged static electricity in coming down? As mountaineers have testified, St. Elmo's fire under certain propitious conditions, even now, will stream like horns from the ears of a subject and from any tool he is carrying. The horns of animals stream fire, too, in such circumstances. And always in mind is the comet with its horns reaching far out from its head. Close the horns and there arises a halo, given to Moses and to saints. The later saints got their radiant 'halos' by traditional inference; for them it is a medal, like millions of Christians wear the crucifix without experiencing crucifixion. Earth and heaven are united in a single symbol once more.

Moses "did not know that the skin of his face shone because he had been talking to Yahweh." He ordered all to draw close so that he could give them the laws. The people's faces shone, too, briefly [9]. Perhaps they felt a sympathetic contagion. Afterwards Moses put a veil over his face whenever he was in public. He removed it when he spoke to Yahweh in the tent and then replaced it when he came out. St. Paul spoke of "Moses, who put a veil over his face so that the Israelites might not see the end of his fading splendor." His skin was probably desqua-

mating. When it was cured, an explanation for removing the veil would not be difficult: to avoid claiming a permanent gift, or as punishment by Yahweh for some peccadillo. One rare picture of ca. 1000 A.D. gives Moses all three: horns, veil, and mask [10]. (See Figure 15.)

We may go farther into the mysteries of Moses' halo, Hugo Gressmann [11], one of the greatest of Old Testament authorities, asserts that Moses always wore a mask, that Moses wanted to play god and, after he had come down radiant from the Holy Mountain, he assumed a sacred mask. Gressmann had no idea of the atmospheric turbulence nor of its affecting Moses' skin; he claimed that priestly masks were to be found elsewhere, whether among the Egyptians or Semitic tribes. By intensive linguistic analysis, Gressmann demonstrates elisions in the Bible where the word "mask" would occur, and says that the word "veil" is a weak and vague substitution of a thousand years later [12].

On the contrary, I find a powerful connection between Moses' perilous sojourn on the mountain, the radiation disease symptoms, his donning the veil or mask, and his incorporating the mask into the required equipment of the priests when working amidst the divine smoke and fire of the Inner Sanctum. Gressmann lets us believe that Moses' mask was his permanent public face; if so, it can only mean that Moses was disfigured for life and therefore wore a mask, naturally proclaimed sacred; or more likely that Moses' facial disfiguration was itself considered a permanent mask of Yahweh, and that Aaron's and other masks were artificial, in imitation of Yahweh's mask and for protection against dangerous radiation and shocks around the Holy of Holies.

I find additional support for this view in the advice of Hyam Maccoby, who asserts that the word in dispute is in fact *Karan*, the only occurrence in all of the Bible in this form. The phrase would then read that *Moses' skin became of horn-like texture*

RADIATION DISEASES

The cause of Moses' halo may have been phosphorous burns,



Figure 15: Moses with Horns, Veil and Mask. (Click on the picture to get an enlarged view. *Caution: Image files are large.*)
(Source: Bible of Lubeck, 1494)

compounded by a dose of radiation. Both elements would be present in abundance in the clouds of the mountain and the artificial clouds of the Tent of the Tabernacle. Whoever entered the Tabernacle unless under order was to be stricken with leprosy [13]. Many sins are punishable by leprosy [14]. And there are various types of leprosy; despite all the detail on the diagnosis and treatment of leprosy in the Book of *Leviticus* (13:1-59; 14), no clear single disease emerges.

A "leprosy" that is not excluded is radiation sickness, which of course during all the centuries when the Bible was seriously studied by scholars was an unknown disease. Skin lesions, blisters, and ultimately death among experimenters with radium and X-ray are a twentieth century phenomena. When the first atomic bomb was exploded over Hiroshima, and features of radiation disease began to emerge, it was thought at first that an infectious plague had followed in the wake of the disaster.

In the Revolt of the Golden Calf, Aaron, whom Moses had appointed high priest, lost hope for Moses and deserted briefly to the opposition. Later Aaron and their "sister," Miriam, who

had become a kind of priestess for women and children, entered the Lord's tent and accused Moses of such irrelevances as taking for his wife a non-Jew. The woman in question may have been the daughter of Hobab, the Kenite, although referred to only as the Cushite (Ethiopian?) in the Bible. Thus suggests Winnett, who adds that this bigamous liaison was probably contracted for political reasons inasmuch as the Jews were now leaving Midianite territory and moving northwards into Kadesh, land of the related Kenites [15].

Moses promptly squelched his relatives. He said, in effect, that if it was Yahweh they would complain to, all three of them should have a talk with Himself. They did, and Miriam, I think, emerged from the tent with a mild case of radiation sickness and phosphorous poisoning that blanched her skin, and greatly frightened her and Aaron. She was to be permanently expelled from the camp for leprosy; but Moses put in a good word for her with Yahweh who limited the expulsion to seven days, after which she returned, healthy, perhaps having fed meanwhile upon the honey-like manna which, like honey, would have been an antidote for radiation sickness and blood-poisoning [16].

According to legend, when Moses wanted to cure Miriam, he drew a circle around himself and, in praying to God, concluded with: "If Thou do not heal her, I myself shall do so, for Thou has already revealed to me, how leprosy arises and how it disappears." Perhaps he was referring to his own "halo" case.

Miriam may have lost a lot of blood cells but she did not become bald. Many in those days were not so lucky. Isaiah probably had their history in mind when later he prophesies: "The Lord will give the women of Zion bald heads, the Lord will strip the hair from their foreheads." [17] Since he raises the same point twice elsewhere, Isaiah must have had an experience in mind in which he firmly believed. But then, far back, in the time of Exodus, the Egyptian Ipuwer had been lamenting: "Indeed, hair (has fallen out) for everybody, and the man of rank can no longer be distinguished from him who is nobody." The upper classes had worn their hair long.

A Swedish commentator, Ragnar Forshufvud, writes that "a dose of 300-400 rem will give temporary epilation while 700 rem will give permanent epilation." (1 rem = the radiation dose of 1 Roentgen of X or Y radiation.) If the whole body is subject to a single dosage of 450 rem, there is only a 50% chance of survival, which may be another reason why Ipuwer had written of Exodus in Egypt, "Indeed men are few, and he who places his brother in the ground is everywhere." [18]

Thomas Foster, "a physician of some note in the scientific world and member of several learned societies in England and the Continent, in a work published in 1829, devotes forty-one pages to a catalogue of plagues and epidemics, in nearly every instance accompanied by a comet." [19] Sometimes beasts (the "murrain") are afflicted as well as or instead of humans.

The relation between chemical and radiation plagues and "real plagues" of viruses and germs is close in the history of Exodus and its aftermath. Realization that their sources may be cosmic disturbances will no doubt help in their investigation. In a recent BBC interview (1977) regarding his research on "Diseases from Outer Space," Professor Chandra Wickramasinghe maintained that "invasions of this type could be responsible for all the major plagues and epidemics which have punctuated our history from antiquity to modern times." He was seconded by his colleague, Fred Hoyle [20].

THE ELECTRO-CHEMICAL FACTORY

Of clouds in *Exodus*, there are the high clouds of obscuring the sky and causing the long-enduring darkness; next the cloud or pillar of smoke that leads the Jews out of Egypt; the cloud and pillar upon the mountain; the cloud arising from the Tabernacle sanctuary; the cloud that moves with the ark; the cloud above Moses' tent outside the camp; and occasional clouds that are dangerous to the camp. Yahweh's fire, which we find synonymous with electrostatic fire, is present in all the clouds. The fire can come before, with, and after the cloud's appearance.

The experience of clouds is frequent. These clouds do not carry rain. They carry vapors which have serious consequences for evil and good. The clouds in all cases are associated with Yahweh; they are dangerous; Moses is uniquely competent to deal with them, and even he is overexposed on the mountain and perhaps on other occasions.

The great pillar of cloud and the high obscuring blanket of cloud are probably connected, the first being an earlier state of vision and contact with the comet's tail and the second being a later state of the elements of the tail that diffused throughout the earth's atmosphere. Comet tails can be millions of miles long and thousands of miles in diameter. Since we have had no late experience with large comets, their components are subject to debate. It has lately become permissible in scientific circles to attribute many kinds of materials to them - elemental and molecular gases, particles, ice and rocks. Should a large comet-tail pass through the atmosphere, it would deposit its own materials, and combine its materials with those of the earth, not only with normal atmospheric components but also with the discharges peculiar to volcanoes and typhoons or tornadoes.

In the major catastrophic columns or typhoons of a comet-earth encounter, therefore, would be discovered a variety of chemicals under turbulent conditions of pressure, heat, and electricity. Picture a vast gaseous and heavy meteoritic fall-out mingling with the eruptions of volcanoes and electrical discharges by the many thousands, and one has the beginnings of a conception of the event. In such a maelstrom, miracles would be multitudinous. We are dealing with a vast electro-chemical factory. The first response of a catastrophized human group is to relate itself to the turbulent skies. Moses was exceedingly busy - up and down the mountain - trying to reproduce on earth what he saw in heaven. Hence what we expect is that certain "miracles" happen naturally and others, much simpler and crude, but nevertheless amazing, happen as the artifices of man. Reciting the Biblical references, we can derive radiation and radiance of various types: a complex chemically-loaded dew; red phosphorus; hydrocarbons; unidentified poisons; sulfur; mercury; ammonia; cinnabar (cinnamon); formaldehyde; manna; and perfumes. The sky and

earth are producing enough heat and electricity to manufacture many products.

The element phosphorus might have been prominent in the Exodus chemical environment. It may have had poisonous effects, especially if accompanied by radioactive materials, in the Nile and the wells of Egypt. It was probably present in the clouds of the mountain. It was a major ingredient in Moses' arsenal, possibly for helping to send up smoke when smoke did not originate in satisfactory abundance from the ark, possibly for communicating with Yahweh in his tent, possibly as smoke bombs. When Moses set up his tent far outside the camp for living and counseling, Yahweh would visit him there: witness the cloud or pillar of smoke that descended whenever Moses entered the tent door [21].

Phosphorus is "not found free in nature except in a few meteorites..." because "it takes fire spontaneously upon exposure to air and forms dense white fumes of the oxide." [22] It is a colorless, transparent, soft wax that glows in the dark. It converts to red phosphorus with sunlight or heat, after which it neither glows nor spontaneously combusts in air. White phosphorus is used to make smoke shells for military use.)

White phosphorus is easily made. Calcium phosphate, a stone, is ground into powder and combined with silversand (silicon dioxide) and charcoal. Carbon monoxide is a by-product. When exposed to air, the phosphorus burns with a bright hot flame, a voluminous dense white smoke, and gives off a poisonous gas. Moses would have known from Egypt the properties of these common materials, what they smelled like when burned, what the clouds on the mountain appeared to be. His main problem would have been to encapsulate the white phosphorus in order to deprive it of air until the moment of use. Small gourds, ceramic jars, or bladders would contain the material under seal. A poisonous grenade would be available to toss into the tents of opponents of Yahweh, such as Dathan and Abiram. They had refused Moses' summons and denied his authority. Moses supervised their execution by Yahweh. The ground was said to split open and swallow their households. The crowd fled the

scene, which might have resembled the hell-fires bursting out and enveloping them. Small amounts of phosphorus would suffice to emit a smoke cloud about the Tabernacle and tent of Moses,

Phosphorescence, which may characterize many objects, is "the emission of light from a substance exposed to radiation and persisting as an afterglow after the radiation has been removed." [23] A phosphorescence may last for an instant, days, or years and will react whenever agitated by heat or optical waves. This refers to the cases of Moses and Miriam and a kind of leprosy, but also to the "footstool of Yahweh" that the elders witnessed; various apatite phosphate minerals are of a green glassy appearance and "are often fluorescent in ultra-violet light...; phosphorescent; sometimes strongly thermoluminescent." [24] Although we cannot be sure of the processes of the clouds of Exodus, the existence of a special electro-chemical environment and an applied science thereof are fairly demonstrable.

The dew that fell in great abundance in the wilderness was no ordinary vapor. It was often red, often poisonous, often conductive and facilitative of electrical discharges. The wearing of Moses-designed heavy and full priestly garments, the washing that went on before and after rituals, the placement of veils and curtains within the Tabernacle, the holes in the tent tops, the arrangements of vessels and paraphernalia: - "Aaron and his sons are to do this lest they die" - these were safety practices and procedures for handling dangerous products. Only later could they be called psychological obsessions, when their functions had disappeared with the fading of the electrical age and the great electrochemical factories of nature.

One scholar, Von Fange, writes that "In the Middle East in Ancient times there was an amazing number of literary references to a garment of flame, the goatskin dyed red, or a ramskin dyed red, or a red-dyed goat. The meaning is completely obscure." [25] An editor's footnote reads: "Obviously references to ramskins dyed red as in Exodus 25:5 [describe] directions from God for construction of the sacred Tabernacle,

and would have no connection with pagan use of goat skins dyed red." Both are connected probably to the red dust and dew that covered everything dead and alive in the Egyptian plagues and from time to time in the wilderness. The startling, ominous, and effective events are typically perpetuated in design and rites. Earlier, we had occasion to discuss the taboos of redness.

MANNA

"When the dew fell upon the camp in the night, the manna fell with it." [26]

Obviously, despite the darkness of the days, a solar heating and nocturnal cooling were occurring in the wilderness. The manna may cure the very radiation sickness often caused by the radiation-loaded dew. Both are part of the Exodus experience of Egypt and Israel. Few scholars doubt that something natural and edible was being made available to the starving Israelites. Almost always, they have sought some desert plant that by its excrescences or pollen fall-out would give nourishment. Buber writes as if the matter were settled [27]:

"The tale is told of manna (a secretion of cockineal insect, tasting like crystallized honey, which covers the tamarisk bushes at the time of the apricot harvest, drips to earth by day and becomes hard at night)."

This is a whit short of absurdity. The large volume of manna, its long duration, its fall from heaven, the technique of its baking, and other details of the story are shunted aside. More persuasive incidents are available, with lichen as the possible agent, thus: "In 1829, during the war between Persia and Russia, there was a great famine in Orumiah, south-west of the Caspian. One day, during a violent wind, the surface of the country was covered with a lichen which 'fell down from heaven.' The sheep immediately attacked and devoured it, which suggested to the inhabitants the idea of reducing it to flour and making bread of it, which was found to be good and nourishing." [28] Electrical winds have been blamed for such drops, which is a step in the right direction.

Manna is described in two places, in somewhat different terms [29]. "Almost any reasonably experienced confectioner will recognize the substance concerned as a common constituent of sugar confectionary, usually called invert sugar." [30] It fell nightly as seeds, for a long time then occasionally. The last fall was reported just before the Battle of Jericho, "and the people of Israel had manna no more." [31] It could be baked into sugar-carbohydrate loaves. Although at first delighted and grateful, the people ultimately became heartily sick of it.

The basis for its natural production was the huge volume of formaldehyde gas, formed by the incomplete combustion of many organic substances. "At least one worker has actually produced sugars directly from very freshly formed gaseous formaldehyde at a temperature of 150°-180°C (H. Vogel at the University of Geneva in 1928)." [32]

A British expert on the chemistry of confections, M.G. Reade, has followed the various processes whereby, from the formaldehyde of incomplete combustion in the atmosphere, edible *manna* could have been naturally fashioned. The problem is like that of artificially accomplishing photosynthesis. He concludes that "Synthesis in a burning fiery cloud is feasible, even probable when other environment conditions are favourable." [33] He thinks that Moses designed the Tabernacle to produce manna, but only because of the tent's construction [34] and not because there is any evidence of manna being actually produced. (Reade does speculate ingeniously that the reason why the often grumpy people followed the leader and Tabernacle was in order to get the manna that Moses was producing artificially.)

His comments on the tabernacle are revealing: "Perhaps the single most basic association is that between the 'Tabernacle of the Lord' and the physical characteristics of the cloud. In laying down guidelines for the construction of a tabernacle, or church, it was clearly stated that the whole was to be the same as had been seen by Moses in the cloud... A burning fiery cloud has to have a fresh air intake... This air intake would probably be at its

base and, it would be tent-shaped.” Here one can be best protected from “poisonous or asphyxiating fumes.”

One might locate such air intakes on mountain tops or man-made tents. Observing, as a trained scientist, from the "eye of the cyclone," that is, for many days and nights, Moses produced the design and specifications for the ark, tent, and tabernacle. Here, as elsewhere, the imitation of nature is used as the basis for an applied science; a priest or layman or political boss or "Just a guy hearing voices" could not produce the works of Moses.

THE BURNT OFFERING

Servius, a commentator on Virgil, writes that "the first inhabitants of the earth never carried fire to their altars, but by their prayers they brought down the heavenly fire." [35] Even in the first century after Christ, Josephus the Jewish historian could describe a successful sacrifice to Yahweh: "There came a fire running out of the air, and rushed with violence upon the altar, in the sight of all, and caught hold of and consumed the sacrifice." But such fires of Yahweh had long been rare, Josephus himself having testified that the Holy Spirit disappeared two centuries before his time. I think that the great electrical flood was mostly dammed by the time of Joshua and then was reduced incrementally from century to century, with perhaps a century or two of revival of flow during the time of the prophets and the end of the Late Bronze Age.

I have paid little attention to the altars of Moses and those that followed. I do not mean the Israelite altar of unhewn, heaped-up stones that was called for by Yahweh at first [36], or the Altar of Incense, but the elaborate one for sacrifices designed by Moses during his mountain retreat. The design of altars generally was fairly straightforward. It is clear what the priests were seeking; it is evident what they found and what failures they experienced. What is most obvious is that altars were uniformly constructed to carry out a simple electrical function, throughout the Near and Middle East. The Cretans, for instance, had horned altars, as did others. Perhaps the very origin of altars goes back to the begin-

ning of the electrical ages, about six thousand years ago, when Zeus in all his forms became a great god and Saturn withdrew.

The concept of archaeo-electro statics permits us to imagine that altars were designed for burnt offerings when it was observed that the gods whom one wished to propitiate were in the habit of dispatching sparks upon metallized prominences such as horns, spears and elevated plates. This was direct contact of a most exciting kind between god and humans. One could scarcely doubt that the gods were receiving and acknowledging the offerings. When Yahweh's fire is not called for, the worshippers use ordinary combustion. When the oil lamps of the Tabernacle were readied upon their seven-pronged lampstand, Moses "then fit up the lamps." [37] Fire did not descend from the atmosphere to do the job.

The great horned altar of Israel in the wilderness was another of Yahweh's Mount Sinai designs that Moses applied at the foot of the mountain [38]. It was a hollow, ninety-inch square cabinet of bronze-plated wood, standing fifty-four inches high, with carrying poles. It was hollow to permit its being filled with stones and dirt according to Yahweh's first instructions out of Egypt. The horns of the four corners were one piece with the rest. According to tradition, this magnificent altar did not work at first; but finally "there came a fire out from before the Lord and consumed upon the altar the burnt offering and fat." The fire stayed there for 116 years without melting the brass or burning the wood, the legend concludes, leaving us to wonder: why '116'?" [39]

A legend has Yahweh reproaching Moses, who wondered whether the divine fire would consume the thin altar brass and wood: "Thou judgest by the laws that apply to men, but will these also apply to Me?" Then, referring to the fires and ice of heaven, he goes on: "Doth the water quench their fire, or doth their fire consume the water? For, 'I am the Lord who maketh peace between these elements in My high places.' No more shall the brass overlay of the altar be injured by fire; even though it be no thicker than a denarium [a coin]." [40] Obviously, he had in mind an electric fire, not one of coals.

Cassuto [41] insists, against exegetes and legends, that the altar had an earthen and stone top. The legendary metal and wood top would be quickly destroyed by a heavy wood or coal fire, as other sceptics, too, have pointed out. I am inclined to disagree with the distinguished Cassuto; electrical conditions were such at this time and so well controlled by Moses that he could be confident of exciting an electrical fire whenever it was required. The sceptics have not considered an electrical fire.

As with the Ark, once the significance of electricity is perceived in regard to the altar, we may deduce certain behaviors and understand others. We appreciate, once again, the immensity of electrification in those days, the universality of electro-static applications in worship, and the possibility of following electrical sensitivities wherever they may lead over the lithosphere and especially up into the mountains, the "high places" to which the Jews repaired more and more as the Earth-charge in relation to near space diminished and the atmosphere cleared.

By "burnt offerings" the Bible means an offering destined for sacrifice on an altar, as well as the same sacrifice after it has been burnt. On one occasion, Moses and Aaron entered the Holy Tabernacle and came out again; then the glory of Yahweh appeared to all the people. And fire came forth from before the Lord and consumed the burnt offering [42].

So far as one may tell, a burnt offering is successfully burnt when it is struck by a spark discharged from above, a divine fire... It need not be cooked; it should be marked or signed. Occasionally the enthusiasm of the language lets one imagine that Yahweh in fact did sometimes voraciously "consume" the burnt offering.

To get Yahweh to accept an animal sacrifice, it may have been prudent to drain the animal of its blood, whence would perhaps come the Judaic taboo of animal blood. Blood conveys electric current. A spark might be dissipated if it short-circuited through a bloody offering.

On the other hand, the blood was useful in the sacrifice for inducing a charge to collect on the metal of the altar base. Moses taught the Israelites to pour the drained blood upon the sacrificial offering, on the altar, and on the ground around the altar. Levites, clean-shaven all over to minimize risks of shock, performed such tasks. Ordinary fires by friction and combustion were also built to burn offerings and to encourage, as with blood, the descent of divine fire.

Water, we indicated in the last chapter, will also expedite an electrical discharge. Altars worked better if means were available to wet the same surfaces that Moses used to pour on blood - not inside the offering but over it, on the altar, around the altar, taking care not to move too close or in any way short-circuit an impending spark.

Elijah, the prophet, was mostly incredible as a worker of miracles. There was enough of the scientific in his behavior in his famous contest with the four hundred and fifty prophets of Baal to judge it correct as to structure even if exaggerated [43]. In a time of great drought for the Northern Kingdom of Israel, when the king and most others were whoring after false gods, Elijah, hiding out from sure death, suddenly catches the message that finally a great thunderstorm is coming to end the drought. He impatiently importunes a friend to ask the king for an interview. The friend says in effect : "Why are you in such a hurry to get killed and to get myself killed?" Elijah insists, and the king sees him. Elijah asks for a chance to confute all the false prophets and the king agrees. A contest is set up on Elijah's terms - the opposition is to choose a bull, sacrifice it, and ask for a sign of the Lord's acceptance. He, Elijah, will do likewise. Whoever receives the sign wins.

The opposition builds its fire, places its offering, dances about, and gets no response. Elijah builds an altar of stone, places his offering, and then pours twelve barrels of water upon the offering. He dowses the offering thrice. He digs a trench around the altar and fills it with water. The time is approaching evening. The water soaks down and makes contact with the water table. The approaching thunderstorm is preceded by a heavy, moist,

ionized, and charged lowering atmosphere. The fire of Yahweh descends upon the offering of Elijah. His triumphant followers escort the prophets of Baal to a nearby place and kill them.

THE BRAZEN SERPENT AND OTHER RODS

A final "miracle-product" permitted by the electrical age to the ingenious scientist was a variety of rods. The most famous was the caduceus of the Greek god Hermes (in Egypt, Thoth), nowadays the symbol of the medical profession because Hermes was also the greatest healer. The next most famous rod was the Brazen Serpent of Moses, then Aaron's Rod, and then, of course, we hear of other wonderful staffs. Every shepherd needs a staff, every walker a cane, every boy a stick.

So we should expect great disbelief to be visited upon rods. Yet rods have a mysterious quality: they are "guns" in slang; they are phalluses among many prehistoric peoples; they are water-finders in the sensitive hands of dowzers; they are electric attractors and lightning-rods; they are Upper Paleolithic batons; they are lances, tilting weapons, flag-poles, may-poles, dolmens, bethels, etc.; no man is complete without one.

Yahweh, in a legend, advertises that "dead things come before Me and leave Me imbued with life," referring to the rod of Aaron which had lain in the inner sanctum of the Tabernacle one night and then "brought forth buds, and bloomed blossoms, and even yielded almonds." [44] This is a flagrant challenge to legend-analysis: what can be made of it?

The Bible tells that Moses, in need of proving why Aaron should be High Priest of Israel, decreed that a beam of wood should be cut into twelve staves, that the Levi's should have one marked for them, and all other tribes one each as well, the Levi staff being that of Aaron. The rods would be left with Yahweh overnight to see which tribe shall have its rod singled out by him as the rod of the High Priest. Aaron's, and Aaron's alone, was transformed in the night, and his priesthood was divinely authorized by test once more.

If there is a kernel of truth in this sacred competition, it must rest with the manipulation of Aaron's stick in the middle of the night. It may be conjectured that it was subjected to severe shock on the mercy seat of Yahweh until it evidenced changes sufficiently symbolic to suggest the buds, blossoms, and almonds described in the Bible and legends. The ark when operative is somewhat like a tornado: it discharges sparks that set up a column of gases and dust and modifies whatever conductor it may embrace.

A tremendous tornado occurred in Chatenay, France, in 1836, and an expert report was made upon it for insurance purposes:

All those (trees) which came within the influence of the tornado, presented the same aspect; their sap was vaporized, and their igneous fibres had become as dry as if kept for forty-eight hours in a furnace heated to ninety degrees above the boiling point. Evidently there was a great mass of vapor instantaneously formed, which could only make its escape by bursting the tree in every direction; and as wood has less cohesion in a longitudinal than in a transverse direction, these trees were all, throughout one portion of their trunk, cloven into laths. Many trees attest, by their condition, that they served as conductors to continual discharges of electricity, and that the high temperature produced by this passage of the electric fluid, instantly vaporized all the moisture which they contained, and that this instantaneous vaporization burst all the trees open in the direction of their length, until the wood, dried up and split, had become unable to resist the force of the wind which accompanied the tornado [45].

Aaron's rod, by discontinuous and repeated sparks, could achieve something of the remarkable representations that the observers saw in it the next day. The other rods had been laid aside, of course. Moses had had several rods, the rod that impressed the Hebrew welcoming committee in Goshen, the rod that he carried into his negotiations with Pharaoh Thoum, the rod that he held high in the first battle with the Amalekites, the rod that he used to find water, and the rod that was the Brazen Serpent. I have mentioned some possible special quality of each in another chapter. Of these, only the battle-staff appears to have been luminously activated; "the Midrashim narrate that the Israelites encountered the Amalekites in a thick veil of

clouds,"[46] hence it must have sparked a light to have such effect on friend and foe alike.

The early rods that behaved like snakes may have been metal or metalized for high conductivity, insulated at the grasping points, and with pointed head to encourage a discharge upwards. If they discharged they would rustle and hiss like snakes. Possibly, too, by a certain disjuncting, sparks might be induced to leap the hinging points and cause a wriggling effect by attraction and repulsion. (Priestley, quoted earlier, was calling such a spark "spider.") As with other magical tricks, the competition of professional magicians would accord to someone the fame of being the best of magicians. If a god or demon is associated with the basic phenomenon, that god, that magician, and that device are altogether connected and acknowledged superior.

The Brazen Serpent (see Figure 16) was the outcome of popular grumblings and protests which provoked Yahweh into sending fiery serpents among the people to bite and kill many of them. Moses, begged to intercede, was told by Yahweh: "Make a fiery serpent, and set it on a pole; everyone who is bitten, when he sees it, shall live."[47] There was no doubt always cause to blame the people for their disagreeable temper. The snakes that caused anguish were probably innumerable animals driven above ground by thermoelectrical phenomena [48] accompanied by fiery electric charges snaking through the ground, else why so many? Why so homeopathic a solution as another fiery snake that is under control? And why the cure from seeing the model excepting that thus would Yahweh and Moses lend their authority to psychosomatic therapy? But the bronze serpent, as an independent spark-generator, might have occupied a private tent of healing. Dr. Mesmer, famous for "mesmerizing" people, was one of "a long line of electrotherapists, that even today practices with some success. Healing might originate in certain cases by electroshock with the priesthood as therapists administering sparks to patients. Other cases of healing might occur by the bactericidal effect of ozone in the rooms where the electro-static machines were operated" as with Mesmer [49].



Figure 16: The Brazen Serpent is Formed (Click on the picture to get an enlarged view. *Caution: Image files are large.*)
(Source: Bible of Lubeck, 1494.)

The bronze serpent, representing unconsciously the comet by its shape and electrification, was carried with the Ark; as Ziegler has suggested elsewhere, it might have been used as an independent capacitor with its rod and snake separated by an insulator so as to permit the tongue to discharge against the head of the rod. It might, too, be employed just behind the mercy seat as the target for discharges from both of the grounded cherubim; and it might be operated as an independent electrical demonstrator affixed to the Ark. Numerous instrumental assemblies and adjustments could be managed for different purposes, with more or less sparking, smoking, noise-making, and explosions.

Since Pliny described the great comet of Typhon as spiral-shaped,[50] there is some reason to connect the serpent with the celestial apparitions of Exodus.

King Hezekiah broke into pieces the Serpent of Moses or a reproduction thereof six centuries later on grounds that it had become the object of idolatry. Or perhaps it could cause panic if it were electrified and, as Ziegler guesses, there would be nowhere to go from a city undergoing siege, or about to do so. The electrical signaling had to be astutely controlled to prevent its causing self-demoralization.

Twenty-five hundred years later, in the first modern outburst of enthusiasm for the rediscovery of electrical fire, there comes once again the idea that electricity cures. The spark-spitting is

not from snakes but from jars. Some religious evangelists, admirers of the new science, unconsciously emulate their Old Testament hero, Moses. So we find in a bibliography the following item, which speaks for itself:[51]

A.D. 1759. - Wesley (John), the founder of Methodism (1703-1791) and the most eminent member of a very distinguished English family, publishes "The Desideratum; or Electricity made Plain and Useful, by a Lover of Mankind and of Common Sense." In this he relates at great length the cures of numerous physical and moral ailments, attributed to the employment of the electric fluid, under such curious headings as "Electricity, the Soul of the Universe," "Electricity, the Greatest of all Remedies," etc.

THE POUCH OF JUDGEMENT

Moses, who hates sorcery and divination, provides a special place for a pair of objects, the Urim and Thummim [52]. He orders to be made a pouch of cloth that is closed at top and bottom but open at its two sides, with gold chains attached to hang it from the High Priest's shoulders and to tie it around his waist. It is the size of a man's hand. To the front of the pouch is attached a gold plate into which are fitted twelve different precious stones, each containing the name of one of the Twelve Tribes. "And into the pouch of judgement you shall put the Urim and Thummim."

No one has found an origin for these two words. They are thought to be a very ancient device. Their shape is "impossible to ascertain." [53] Only top officials, perhaps only heads of state or tribes, could ask the priest to employ them. "They served as a means of inquiring of God, that is to say, of obtaining from the deity, with the help of the priest, an answer concerning matters beyond human ken." [54] Since they were used to choose which of two goats would be sent into the desert to Azazel on the Day of Atonement, it is thought they were a kind of lot. Other incidents of their employment are known. They gave short answers, usually "yes" or "no," to carefully framed question about a highly uncertain decision. Only one question could be handled at a time.

Moses never used them, probably because he could speak directly to Yahweh. But Joshua did, and Saul, and David. After David, the two objects disappear from the Bible. Legend does not go farther than to implicate the Urim and Thummim in the processes of inquiry. The open-sided pouch indicates that the pieces were not carried in it, but employed in it, for at least a hand might enter it,

Legend says that the two words mean "Light and Truth." "Only a high priest who was permeated with the Holy Spirit, and over whom rested the Shekinah, might obtain an answer, for in other cases the stones withheld their answer. But if the high priest was worthy, he received an answer to every inquiry, for on these stones were engraved all the letters of the alphabet, so that all conceivable words could be constructed of them." [55]

For lack of any better explanation, we are impelled to think once more of electrical mysteries. The Holy Spirit and Shekinah, like angels, may be metaphors for a manifestation of electricity. The "Light" does not always appear. The priest must be worthy. King Saul could not get an answer one time, and searched then who had done wrong, for Yahweh "did not answer him that day." [56]

A successful attempt is described by the legend: after the King or head of the Sanhedrin looks into the face of the priest and makes inquiry,

The high priest, looking down on his breastplate, then looked to see which of the letters engraved on the stones shone out most brightly, and then constructed the answer out of these letters. Thus, for example, when David inquired of the Urim and Thummim if Saul would pursue him, the high priest Abiathar beheld gleaming forth the letter Yod in Judah's name, Resh in Reuben's name, and Dalet in Dan's name, hence the answer read as follows: Yered , 'He will pursue.' [57]

More electricity is revealed here: certain stones shine brighter than others, "gleaming forth." The priest ponders the letters and composes the reply as best he can.

We cannot truly solve this mystery with all of its mechanisms - or electronics. Relevant is the fact that the famous early modern scientist, Gilbert (1600), performed and described hundreds of small experiments to determine the electromagnetic properties of precious and semi-precious stones. For most of 200 years following him, scientists pursued the same type of experimentation. Efforts were made to classify all stones by their electrical properties. Jewish legend claims to know what the twelve stones of the Pouch of judgement were. A discussion of the truth of the legend and of these stones and other stones also proposed is not possible here. It suffices to speculate that the original stones fell into a similar order of electrical behavior; particularly, each engraved tribal gem would collect, hold, and emit the same charge under like conditions, as would befit a confederation of equals.

The Urim might be an electrifying brush, a "rubber" the modern scientists called it. The priest would rub the gems until they held a charge, or rub them one by one. This he could do more easily by steadying the pouch with one hand from inside it. The Thummin might be a stubby rod of metal. The priest would whirl it in the air a fixed number of times and then present it to a tribal stone. He would repeat the procedure with all other stones in succession. If a spark gleamed forth, the letter would be used, otherwise not. Then the full word would be combined from the letters that lit up. The procedure was not dangerous; nevertheless it was most holy. King Saul would have killed his son, Jonathan, that day, because, in successive inquiries of the pouch, Jonathan was blamed for the absence of Yahweh. But the people rebelled "and redeemed Jonathan and he did not die." [58]

Notes (Chapter 5: Legends and Miracles)

1. *Ex.* 19:8.
2. *Ex.* 20:18.
3. *Cf.* Ps 97:4-5: "hills melted like wax;" "the mountains melted, even that Sinai" *Jg* 5:4-5.
4. *Ex.* 24:9, 10.
5. *Ex.* 24:15-18.
6. G III 137.
7. *Moses*, 243.
8. Berkeley: U. of Calif. Press, 1970, p.138-139.
9. G III 92-3.
10. Mellinkoff, *op. cit.*, plate II.
11. Hugo Gressmann, *Mose und Seine Zeit*, Gottingen, 1913; *cf.* Cassuto, 448-51.
12. Wayne A. Meeks ("Moses as God and King," 254-71 in Jacob Neusner ed., *Religions in Antiquity*. Leiden: Brill, 1970, 370-1) writes that "in very diverse sources there persist the remnants of an elaborate cluster of traditions in Moses' heavenly enthronement at the time of the Sinai theophany."
13. G III 190.
14. G III 213.
15. P. 198; *Cf. Num.* 11:35; 12:1-15.

16. Ziegler, 45-7.
17. *Is.* 3:17; *cf.* 7:20; 3:24.
18. In II *SISR* 2(1977), letters, *cf.* comments on both famine and depilation in 3 pp. 101-2, and B. O' Gheoghan in II *SISR* I (1977), pp. 2-3, Where radiation disease is discussed as causing abrupt stoppage of childbirth at time of Exodus in Egypt.
19. Francis II. Baker, "Comet Lord," 189 *Living Age* (June 27, 1891). pp.818-23, repr. in W. Corliss, comp., *Strange Universe*, A2-ALC-001.
20. See also their book *Lifecloud*, Harper's and Row, New York, 1978.
21. *Ex.* 33.
22. VII *Encycl. Britannica* 1964, hereafter referred to as *E.B.*
23. VII *EB* p.962.
24. *Ibid.*
25. (1975), 136, citing George E. Mendenhall, *The Tenth Generation*, Baltimore: John Hopkins U. Press, 1973, 43,109.
26. *Num.* 11:9.
27. p.80.
28. M.J. Teesdale, "The Manna of the Israelites, "3 *Science Gossip* (1897) 229-33.
29. *Ex.* 16:14-15,21,31; *Num.* 11:7-8.
30. Reade, "Manna as a Confection," I *SISR* 2 (1977), 9.
31. *Joshua* 6:12.
32. Reade, p.10.

33. *Ibid.*, p.12.
34. Reade believes that the tent was pitched high at the center to let out fumes. Though logical, this view conflicts with the ordinary reading, which results in a construction as depicted in figure 13.
35. *Commentary on Virgil: XII, 200; cf. Eclogue VI, 42*, quoted by Blavatsky, I, 526.
36. *Ex. 20:24-5.*
37. *Ex. 40:24-5.*
38. *Ex. 27:1-8.*
39. III G 184.
40. III G I62.
41. Cassuto, 362-3.
42. *Lev. 1-9; 10;23.*
43. III *Kings* 18.
44. G III 162.
45. Hare, R.; *Journal of the Franklin Institute*, 54 (1852) 28-29.
46. Velikovsky, A. *in C.*, 60; 55-6. *Ex. 17:8.*
47. *Num. 21:4-9.*
48. Before the Haicheng (China) earthquake of Feb. 4, 1975, "there were a multitude of warnings, local changes in the earth's magnetism and snakes coming out of their lairs in the frozen ground." *NY Times*, Oct. 1, 1979, 60.

49. Manoilov, 81.
50. *Natural History*, II, ch. XXII, 91.
51. Mottelay, 216.
52. *Ex.* 28:15-3; see Cassuto 372-87.
53. Cassuto, 380.
54. *Ibid.*
55. III G 172-3.
56. *I Sam.* 14:37-38.
57. III G 172.
58. *I Sam.* 14:45.

**[Click here to view
the next section of this book](#)**