

On Saturn And The Flood

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[Editor's Note: This essay is based upon a lecture given by Immanuel Velikovsky at the University of the New World, Valais, Switzerland, in 1971. It was first transcribed by his secretary, Mr. Jan Sammer, who supplied both additional textual material (offset by brackets) as well as certain relevant referential data. Dr. Velikovsky's lecture was derived from his own unpublished manuscript -*Saturn and the Flood* - which was first conceived and written in the early 1940's. The present article is thus a condensation of a much larger work currently being prepared for publication. - LMG]

Worlds in Collision comprises only the last two acts of a cosmic drama -- one that occurred in the middle of the second millennium before the present era; the other during the eighth and early part of the seventh century before the present era. Prior to the events described in *Worlds in Collision*, Venus -- following its expulsion from Jupiter -- was on a highly eccentric orbit for a period of time measured certainly by centuries, perhaps millennia, before its near-encounters with the Earth. While the actual beginning of the drama is shrouded in the mist of grey antiquity and difficult to pinpoint with exactitude, there is a point at which a clearer picture emerges. This is the time when the two giant planets -- Saturn and Jupiter -- approached each other closely. Possibly they were close for a long period of time, passing near one another as they traveled along orbital paths quite dissimilar to those of today.

Saturn and Jupiter are so often associated in cosmological history that sometimes I even considered the possibility that they may have constituted a double star system, of which there are many in the universe. I said that Saturn and Jupiter were stars, though today we know them as planets. Actually, in *Worlds in Collision*, in the last chapter, I also used the word "star" in referring to the two giant planets. There I wrote, with respect to the future, that "some dark star, like Jupiter or Saturn, may be in the path of the sun, and may be attracted to the system and cause havoc in it".(1) At that time it was said that they were planets, not stars, while today it is known that Jupiter and Saturn, too, are star-like, producing several times the amount of heat they receive from the Sun.(2)

Today Jupiter moves on an orbit of twelve terrestrial years and is about half a billion miles away from the Sun, whereas we are some ninety-three million miles distant. Saturn is much farther: it is the next planet beyond Jupiter, approximately another half billion miles outside Jupiter's orbit. They are presently not of the same size or volume. Jupiter is more than three hundred times more massive than the Earth, but Saturn only ninety-five times. In volume, Jupiter is about thirteen hundred times that of the Earth, whereas Saturn is only about eight hundred times that of the Earth. Today Jupiter is actually more massive than all the other planets, Saturn and the rest, put together.

The cosmological thought of ancient peoples conceived of the history of the Earth as divided into periods of time, each ruled by a different planet. Of these the epoch of Saturn, or Kronos, was remembered as a time of bliss, and it was made to precede the period during which Jupiter was the dominant deity. Insofar as I could understand the physical events that affected the globe in times preceding the Middle Kingdom in Egypt, I was able to explain them as the results of a disturbance in which both Jupiter and Saturn participated. Various peoples witnessed the events and described

them, as a celestial-human drama in different forms: the Greeks, for example, had Jupiter-Zeus, the son of Saturn-Kronos, dethrone his father and banish him, and take his place to become the supreme deity. In Egyptian folklore or religion the participants in the drama are said to be Osiris-Saturn, brother and husband of Isis-Jupiter. And it is not that the wife dethrones the husband, nothing of the kind - there is, instead, a fight going on in the sky in which some body, described as Seth, attacks Osiris and kills, actually dismembers him; and after this Isis travels in search of the dismembered parts of Osiris. You see how the two dramas are hardly at all alike. I believe that my long experience in interpreting dreams and associations of my fellow men probably was of help to me to see similarities where the similarities were not easily seen.

An Egyptologist, one of the most prominent Egyptologists of the last forty years (he died several years ago), Sir Alan Gardiner, wrote -- and I read it twice in his writings(3) -- that he could not understand who Osiris was. Osiris occupied an extremely important role in the religion, folklore, and rites of Egypt. But who was he? Was he a king who had been killed? -- Gardiner could not figure it out. He did not understand that Osiris represented a planet, Saturn, as did Tammuz in Babylon. Sir James Frazer, author of *The Golden Bough*, describes in the volume *Adonis, Osiris, Attis* the great lamentations and crying for the fate of Tammuz. Similar rites were observed in Egypt for Osiris; and it should be understood that these lamentations were actually for Saturn, because the time of Saturn - the Golden Age of Saturn, or Kronos -- came to its end when the supreme god of that period, the planet Saturn, was broken up.

I have already discussed the statement, contained in the Tractate Brakhot of the Babylonian Talmud, which points to the celestial body Khima as the source of the Deluge; and I have shown why Khima is to be identified with Saturn.(4)

[Hindu sources also provide information which links the planet Saturn with the Deluge. This catastrophe is said to have taken place during the Satya yuga, in the reign of Satyavrata, who is usually identified as Saturn. Actually, it becomes apparent that the whole epoch named Satya yuga was the Age of Saturn as well as of the Deluge. Sir William Jones, who occupied himself mainly with comparative linguistics and with Hindu lore, expressed this very thought. He wrote that the Satya yuga meant the Saturnian Age, and that this was the Age of the Flood.(5)]

Also in the Mexican codices it is said that the first world age, at the end of which the Earth was destroyed by a universal deluge, and which was therefore called "the sun of water" or Atonatiuh, was presided over by Ce-acatl, or Saturn.(6)

The ancient sources all point to Saturn; but how did Saturn cause the Deluge? What did really happen?

Suppose that two bodies, such as Jupiter and Saturn, were to approach one another rather closely, so as to cause violent perturbations and huge tidal effects in each other's atmospheres. As a double star, or binary, they might interact to the extent that, under certain conditions, the interaction of the members of such a pair will lead to a stellar explosion, or nova. A nova is thought to result from an instability in a star, generated by a sudden influx of matter, usually derived from its companion in a binary system. If what today we call Jupiter and Saturn are the products of such a sequence of events, their appearance and respective masses must formerly have been quite different.

Such a scenario would explain the prominence of Saturn prior to its cataclysmic disruption and dismemberment -- it must have exceeded Jupiter in size. At some point, during a close approach to Jupiter, Saturn became unstable; and, as a result of the influx of extraneous material, it exploded,

flaring as a nova which, after subsiding, left a remnant that the ancients still recognized as Saturn, even though it was but a fraction of the size of the celestial body of earlier days.

[Jupiter, stripped of its outer envelope, was seen as a new creation and received a new name -- Horus in Egyptian texts, Zeus in Greek mythology. Thus did Isis-Jupiter give birth to Horus, who was also Jupiter; and similarly Rhea, Kronos' companion, produced Zeus.] In Saturn's explosion much of the matter absorbed earlier was thrown off into space. Saturn was greatly reduced in size and removed to a distant orbit -- the binary system was broken up and Jupiter took over the dominant position in the sky. The ancient Greeks saw this as Zeus, victorious over his father, forcing him to release the children he earlier had swallowed, and banishing him to the outer reaches of the sky. In Egyptian eyes it was Horus-Jupiter assuming royal power, leaving Osiris to reign over the kingdom of the dead.

My conclusion that, as a result of its interplay with Jupiter, Saturn became a nova,(7) I found confirmed in many ancient sources, in which Saturn is regularly associated with brilliant light; but I was led to this idea first of all by a certain clue contained in the Biblical account of the Deluge. The story as found in the book of Genesis starts with these words: "And it came to pass after seven days, that the waters of the Flood were upon the earth."(8) It is not explained, after seven days of what? Some words seem to be missing here from our text of the Old Testament. It is clear, however, that Isaiah refers to the same seven days in his description of the messianic age to come, when "the light of the moon shall be as the light of the sun, and the light of the sun shall be sevenfold, as the light of the seven days...."(9) This memory of the seven days of light preceding the Deluge(10) is a most important indication of the physical cause of the catastrophe. The intense light, filling the sky, points to a source in a nova within the solar system.

If, as all evidence indicates, the nova was in fact Saturn, we may obtain an estimate of the Earth's distance from the source of the illumination in the following way: The light from Saturn's explosion probably reached the Earth in a matter of minutes, practically simultaneously with the beginning of its nova phase; but the waters followed seven days later. Though ejected in the same catastrophic disruption, the Saturnian gases or filaments took a week to reach the Earth. If we can estimate the initial ejection speed of this material(11) and fix with some approximation the length of the day at that time, it may be possible to get an idea of how far removed the Earth was from the focus of the cataclysm. It is conceivable that the Earth was, at that time, a satellite of Saturn, afterwards possibly becoming a satellite of Jupiter.

With the end of the seven days of light the Earth became enveloped in waters of cosmic origin, whether coming directly from Saturn -- and Saturn is known to contain water(12) -- or formed from clouds of hydrogen gas ejected by the nova, which combined, by means of powerful electrical discharges, with the Earth's own free oxygen. There are definite indications of a drastic drop in the atmospheric oxygen at the time of the Deluge - for instance, the survivors of the catastrophe are said in many sources to have been unable to light fires. The Midrashim and other ancient sources describe the waters of the Flood as being warm;(13) in addition the waters may have been rich in chlorine, an element which in combination with sodium forms common salt. Marine geologists are unable to trace the origin of the huge amounts of chlorine locked in the salt of the Earth's oceans, the Earth's own rocks being rather poor in this element and incapable of supplying it in the needed quantities. Chlorine may thus be of extraneous origin; being a very active element, it could possibly be present in some different combination on Saturn.

The effects of nearby supernovae on the biosphere have been the object of intensive study by geologists in recent years,(14) in an attempt to account for abrupt changes in the history of life on

this planet. Sudden extinctions were followed by the appearance of new species, quite different from those preceding them in the stratigraphic record. In a relatively brief interval whole genera were annihilated, giving way to new creatures of radically different aspect, having little in common with the earlier forms they replaced.(15) Thus, over the past two or three decades, many geologists and paleontologists have found themselves increasingly drawn to the view that the observed abrupt changes in the biosphere, such as that which marked the end of the Mesozoic and is thought to have brought with it the extinction of the dinosaurs,(16) among other animal groups, could best be explained by the exposure of the then living organisms to massive doses of radiation coming from a nearby supernova. The radiation would annihilate many species, especially those whose representatives, whether because of their large size or for other reasons, were unable to shield themselves from the powerful rays; at the same time, new organisms would be created through mutations, or "macro-evolution".(17) Animals would suffer much more severely than plants -- on plants the principal effect would be mutagenic.(18)

After the Deluge many new forms of life came into beings especially plant life. Thus it happened that Saturn was later called a god of vegetation. Frazer in his *Golden Bough* considered Osiris and Tammuz to be nothing more than vegetation gods - so strong was Saturn's connection with the new forms in the plant kingdom that appeared following the Deluge.

There is one important phenomenon which the supernova theory does not explain, however, namely the geological upheavals that accompanied the great extinctions. The Midrashic sources relate that, during the Deluge, all volcanoes erupted;(19) and other ancient accounts assert the same. Changes took place in the lithosphere as well as in the biosphere. Most pronounced, however, were the changes in the hydrosphere -- the volume of water on the Earth was vastly increased. And it is of interest that the Atlantic Ocean was called by the ancients "the sea of Kronos"(20) -- indicating that it came to be only after the Deluge.

The memory of these stupendous events survived for millennia and vestiges of the cult of Saturn persist even till today. One of these memorials is the feast of light, celebrated in mid-winter: Hannukah or Christmas, both stemming from the Roman Saturnalia. These are all festivals of light, of seven days' duration, and they commemorate the dazzling light in which the world was bathed for the seven days preceding the Deluge; in their original form these festivals were a remembrance and a symbolic re-enactment of the Age of Saturn. It was said that in that age there had been no distinction between masters and servants - thus in Rome, for the duration of the Saturnalia festival, the household slaves were freed, and were actually waited on by their masters. Also the statue of Saturn which used to stand in the Roman Forum was for a time released from its bonds. This statue, which had bands around its feet, represented the planet Saturn with its rings -- it was understood that it was Jupiter that had bound Saturn with these bonds after he had overthrown Saturn. Astronomers are unable to explain their origin, but they must have formed in that event in which Jupiter disrupted Saturn.(21)

There is evidence that the ancient Maoris of New Zealand were also aware of the rings around Saturn. They called the planet Parearau, which means "her band quite surrounds her".(22)

Saturn was the chief deity of, among other peoples, the Phoenicians and the Scythians - in cuneiform sources the Scythians are called Umman-Manda, or "the people of Saturn". The Phoenicians used to bring human sacrifices to the planet, calling it Moloch, or "king". Usually children were the victims, consumed by Moloch, as Saturn had devoured his own children. Porphyry records the persistence in some cities of the Greek world of human sacrifices to Saturn well into Roman times.(23)

[The worship of Saturn was also reflected and perpetuated in political institutions in many parts of the world. In ancient Egypt the ruling king was identified with Horus, or Jupiter, as the earthly analogue of the reigning heavenly power. Upon his death he came to be regarded as Osiris, or Saturn, a departed but still highly venerated heavenly body.]

In the Chinese concept of kingship, which persisted till the early years of this century, the Emperor was the earthly representative of the ruling planet Saturn. Ssu-ma Ch'ien, the great Chinese historian of the second century before the present era, in his treatise on *The Rulers of the Heavens* wrote that Saturn is the planet of the Sovereign, or the Emperor. As Saturn occupied the central place in the sky, even so the Emperor was at the center of his realm on Earth. Thus Saturn came to be connected in Chinese thought with the pole star, because the pole star marks the "center" of the sky around which the entire heavenly vault revolves -- it was considered the most favored place.(24) Saturn was regarded as the most important celestial object, corresponding to the Emperor, and thus placed in the center of the sky. So we see that the Chinese monarch was not a "sun-Emperor" -- he was a Saturn Emperor.(25) What could have moved the Chinese to put such stress on the importance of Saturn if this planet was always only a faint, sluggishly moving point of light in the starry sky? Saturn's role in the Chinese idea of government, preserved in its political institutions almost till our own days, lets us get a glimpse of the planet's importance in the past as a dominant celestial body.]

References

1. *Worlds in Collision*, Chapter 9, Section "The End".
2. [D. McNally, "Are the Jovian Planets 'Failed' Stars?", *Nature* 244 (August, 1973), pp. 424-426; R. F. Loewenstein, et al., "Far Infrared and Submillimeter Observations of the Planets", *Icarus* 31 (1977), p.315. Cf. *Astrophysical Journal* 157, pp.169ff. - JS. Also see *Science News*, Vol.109 (Jan. 17, 1976), pp.42-43; *American Scientist*, Vol. 63 (Nov.-Dec. 1975), p. 638; *Science News*, Vol.116 (Sept.15, 1979), p.181; *Pensee IVR I* (May, 1972), p.12 under the entry JUPITER. - LMG]
3. *Journal of Egyptian Archaeology* 46 (1960), p.104; *Egypt of the Pharaohs* (Oxford Univ. Press, 1961), p.424.
4. "Khima and Kesil" in *KRONOS III:4* (1978), pp.19-23.
5. ["On the Gods of Greece, Italy and India" in *Asiatick Researches I* (1799), p.234. Cf. E. Moor, *The Hindu Pantheon* (1864), p.108. - JS. Also see *Larousse World Mythology*, ed. by Pierre Grimal (N.Y., 1965), p.244. - LMG]
6. E. Seler, *Gesammelte Abhandlungen*, Vol.II, p.798. [Also see *Mythology of the Americas* (N. Y., 1968), pp.180-181. - LMG]
7. [Cf. the remarks by William Mullen in *Pensee IVR III* (Winter, 1973), p.14 "Velikovsky has suggested that as a result of disruption Saturn went through a short nova-like phase in which its light would have obscured everything else visible from earth; the deluge followed shortly thereafter." - LMG]
8. Genesis 7:10.
9. Isaiah 30:36.
10. Similar memories are to be found in Babylonian and Hindu sources; an intense light flooded the Earth just prior to the Deluge.
11. [The usual range of the velocities is between 1,300 and 2,500 km/sec. See *Science News*, Vol. 110 (October 16,1976), p.251. - JS]
12. [See T. Ferte, "A Record of Success" in *Pensee IVR I* (May, 1972), p.23 under the entry SATURN. Velikovsky correctly claimed that "Saturn contains (or consists of) water The Saturnian rings consist of ice". Pioneer 11 indicated that Saturn's core is "wrapped in a compressed blanket of such materials as water, methane and ammonia extending to about 0.23 percent of Saturn's radius (0.23 Rs)". Furthermore, "many researchers have assumed that the ring particles are composed largely of water ice, and the new data seem supportive" (*Science News*, 9/15/79, p.181). - LMG]

13. See sources in L. Ginzberg, *The Legends of the Jews* (Philadelphia, 1925), Vol.V, p.178.
14. [The first proponent of the supernova hypothesis was O. H. Schindewolf in his *Der Zeitfaktor in Geologie und Palaeontologie* (Stuttgart, 1950); see also idem, "Ueber die moglichen Ursachen der grossen erdgeschichtlichen Faunenschnitte" in *Neues Jahrbuch der Geologie und Palaeontologie, Abh.* 10, pp.457-465; V. I. Krasovsky and I. S. Shklovsky, "Supernova explosions and their possible effect on the evolution of life on the Earth" in *Dokl. Ac. Sci. USSR* 116 (2): pp.197-199; L. J. Salop, "Glaciations, Biologic Crises and Supernovae, *Catastrophist Geology*, Vol.2, no.2 (1977), pp.22-41. JS]
15. see N. D. Newell, "Revolutions in the History of Life," *Geological Society of America Special Papers* 89, pp.68-91.
16. But see my article in *KRONOS* II:2, "Were All Dinosaurs Reptiles?" (Nov.1976), pp.91-100. [Cf. Adrian J. Desmond, *The Hot-Blooded Dinosaurs* (N.Y., 1976), especially pp.184-196, 224-225; also see "Cosmic Radiation Blast Linked to End of Dinosaurs" in *New York Times*, 5/30/79, p.A20. - LMG]
17. see my comments in *Pensee* IVR IV, "The Pitfalls of Radiocarbon Dating" (Spring-Summer, 1973), p.13 - "...in the catastrophe of the Deluge, which I ascribe to Saturn exploding as a nova, the cosmic rays must have been very abundant to cause massive mutations among all species of life" In 1963, in a letter to H. H. Hess, I suggested that tests should be devised for detection of low energy cosmic rays emanating from Saturn, especially during the weeks before and after a conjunction of Earth-Jupiter Saturn" (see *Pensee* IVR 11 (Fall, 1972), p. 28; Velikovsky Reconsidered, "H. H. Hess and My Memoranda" (N. Y., 1976), p.49). Besides cosmic rays, I have suggested that Saturn emits X-rays (see *Pensee* IVR I (May, 1972), p. 23). [Also see "Long-period X-ray transients" in *Science News*, Vol. 110, Oct.16, 1976, p.250. - LMG]
18. K. D. Terry and W. H. Tucker, "Biologic Effects of Supernovae" in *Science* 159 (1968), pp.421-423.
19. *Sefer Hajashar*.
20. See for example Plutarch, *Isis and Osiris*, Chap. 32; Clement of Alexandria, *Stromata*, Vol.8, p.360; Aristotle, fragment no.196.
21. For a possible explanation of the mechanics of the formation of the Saturnian rings, cf. H. Friedman, "Cosmic X-ray sources: A progress report" in *Science* 181 (3 August 1973), p.396. [Cf. *American Scientist*, 66 (Jan.-Feb.,1978), pp.30-37. - LMG]
22. E. Best, *The Astronomical Knowledge of the Maori, Genuine and Empirical: New Zealand Dominion Museum Monograph* (Wellington, 1922), p.35.
23. Porphyry, *On the Abstinence from Animal Food*, transl. by Th. Taylor (Centaur Press, U. K., 1965), p.81 (II.27), p.102 (II.54).
24. [Cf. similar assertions in Proclus, *In Platonis Rem Publicam* II.213.4f.; Eusebius, *Praeparatio Evangelica* VI. 1.4; Nonnos, *Dionysiaca* 4 1.350. - JS]
25. [Cf. Giorgio de Santillana and Hertha von Dechend, *Hamlet's Mill* (Boston, 1969), p.129. - LMG]