

GEOGRAPHY AND NUMERICS OF EDEN, KHARSAG AND PARADISE: SUMERIAN AND ENOCHIAN SOURCES VERSUS THE GENESIS TALE

by

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Summary

In two papers [1,2] we have analyzed the geographical data referring to the Garden of Eden, the place where according to Genesis the "first" human couple of Adam and Eve was "created". We concluded that the biblical data were satisfied by identifying the Garden of Eden with the Hunza valley in northern Pakistan. In this paper we consider the geographical information in Genesis concerning the place of "creation" in Sumerian sources and in the books of Enoch. We conclude that such data are consistent with our previous identification, extending moreover the information pertaining to the region around the Hunza valley and providing a new interpretation of what the mythical *underworld* might have been. We end with a review of possible meanings of the "gods" and "creation" stories, within the catastrophic quantavolutionary view of the evolution of the solar system and of mankind in the period circa 12.000 BC to circa 700 BC, given by Velikovsky [3], De Grazia [4], De Grazia and Milton [5] and Ackerman [7,8].

1. Introduction

IN TWO PREVIOUS papers [1,2] we have analyzed the geographical data in Genesis about the Garden of Eden (GAN in Hebrew, *paradeisos* in the Septuaginta Greek version of the 3rd century BC, a word of Persian origin meaning "walled garden"). Such data are the following:

- the information that four rivers originate from the same geographical location; here we argued that the usual translation *a river dividing into four rivers* is wrong, in addition of being geographically virtually impossible, *nahar* having not only the meaning "river" but also that of "snow field"
- the names of the four rivers: *Hindekel*, *Gihon*, *Pishon*, *PRT* (*PRT* is usually translated as *Euphrates*, but we related *PRT* to *perath*= *fertility*, *pirot*=*fruit*, *parot*=*cows*, hence *PRT* would be the *river of food bearing country*)
- the information that *Hindekel* flew eastwards of "Ashur"

- the information that Gihon bordered the land of *Kush*
- the information that Pishon bordered the land of *Havilah*, rich in gold, onyx (?) and bdellium (usually assumed to be an aromatic substance; but in [2] we suggest the meaning "asbestos")
- the information that PRT watered the Garden of Eden, located in the eastern part of Eden
- the information that the Garden of Eden had an eastern access (a "gate"), wherefrom Adam and Eve were expelled; the gate was defended by a Cherubim (KRB) branding a fiery sword.

OUR THESIS in [1,2] was that a location does indeed exist on earth where all the above geographical details are satisfied. Such a location seems to have escaped attention of all previous people involved with the problem of the geography of Eden (albeit we suspect that our proposed location may have been known to the Ismaelites or to the Druses and be part of their still amply secret doctrine). In [2] we have therefore criticized some serious attempts, e.g. by Rohl [9] and by Salibi [10], to locate the Garden of Eden elsewhere (respectively in eastern Anatolia or in south-western Arabia).

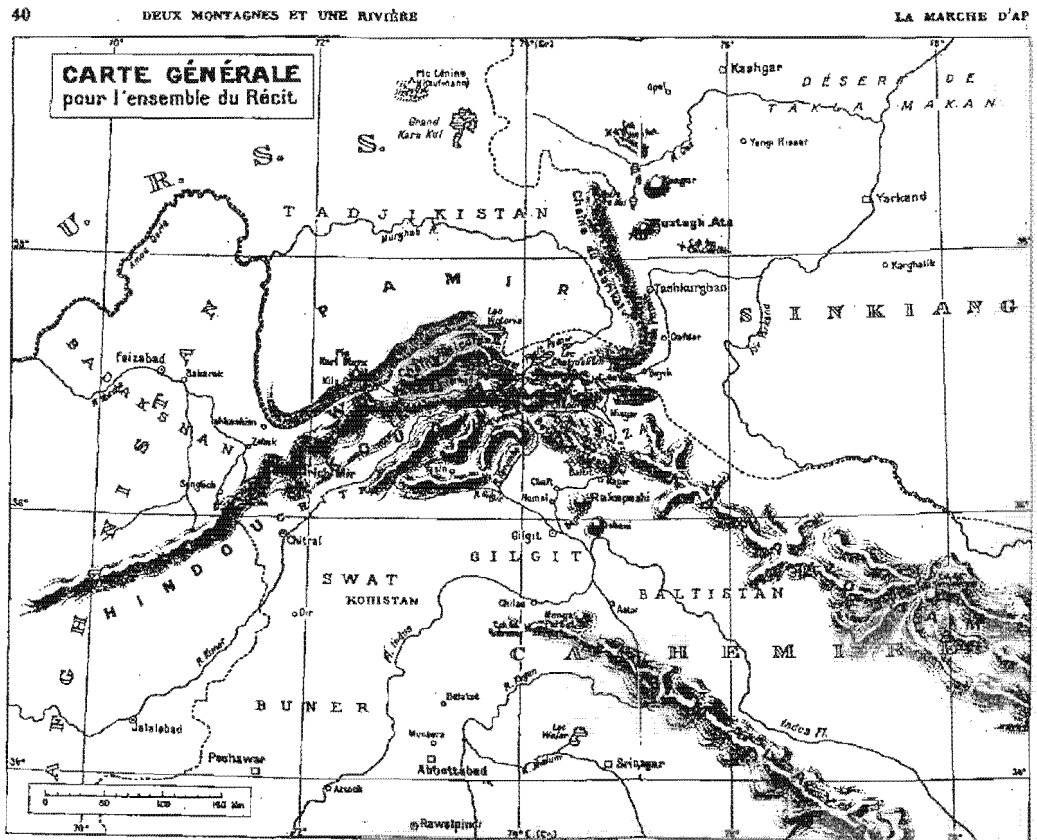
Our interpretation of the Genesis geographical data is as follows:

- Eden consists of the very special mountaineous region of central Asia where four great rivers spring out of the huge massif that separates the Hunza valley in north Pakistan from the Wakhan valley of the eastern Afghanistan province of Badakshan.

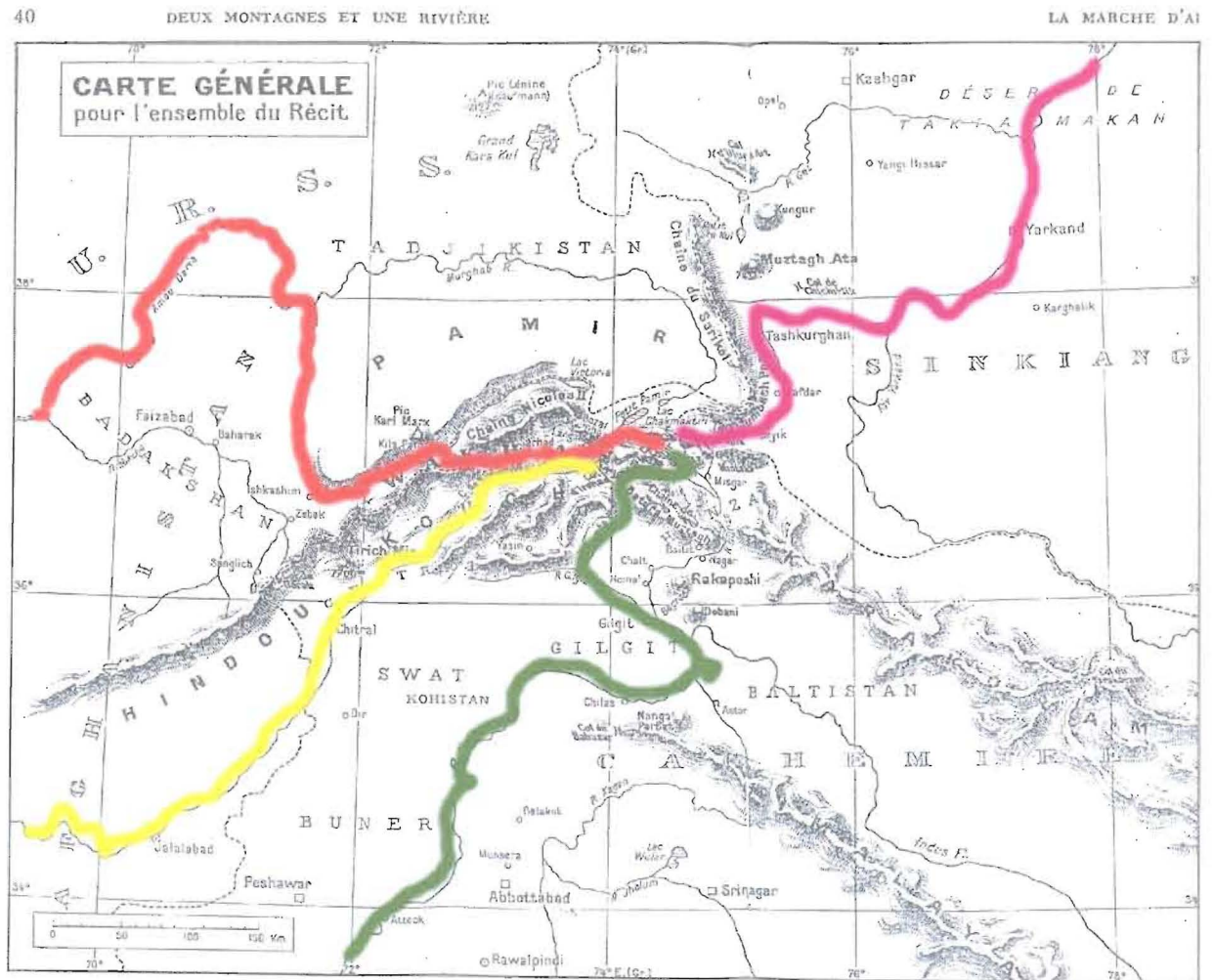
This is also the region where four mighty mountain ranges join, namely the Karakorum from SE, the Hindukush from SW, the Pamir-Tianshan from NW, the Kunlun from NE. The precise borders of Eden are undefinable, but the fact that the Garden is said to lie in the eastern part suggests that several regions, consisting of fluvial valleys, made up Eden. This consideration will be reinforced by the analysis of the Sumerian texts presented in this paper. We think that Eden comprised at least the Hunza Valley (the Garden, GAN), the upper Gihon valley, i.e. the Badakshan (location of the only known mine of lapislazuli in ancient times, the Blue Mountain; and probably of the antediluvian city of Bad Tibira), and the upper valley of the Mintaka-Tashkurgan river, the present Karakol, down at least to the city of Tashkurgan (the city of "Ashur" as we argued)

- the four rivers are all mighty rivers (lengths in the range 500 to 2500 km), with their sources a few km or at most a few dozen km one from the other. They are born in the massif that separates the Hunza valley from the Badakshan, with peaks cuminating in the Hunza Kunji, at 7785 (we will give our interpretation of the meaning of this name and its special identification in the Enochian geography of "paradise"). Such four rivers are identified by us as the following rivers in their modern names:

- the Hindekel with the river born as Mintaka and ending as Tarim in the sands below sea level of the Lop Nor desert; about 2500 km length
- the Gihon with the river



Map 1: The region surrounding Hunza (from Tilman 32)



Map 2: Showing the four rivers exiting from the massif separating Hunza from Wakhan

- presently named Pandji for the part of its course amid mountains, as Amu Darya for the part in the Turanian plane, ending up in the Aral Sea, some 2500 km long; we noted that the biblical name Gihon was used instead of Pandji until the 19th century
- the Pishon with the river now variously named as Mastuj, Yarkhand, Konar, Kabul, joining the Indus after Peshawar, some 1000 km long. We suspect that this river in the past did not join the Indus, changing mid course a SW direction brusquely into an eastern direction, but it continued in the SW direction where we now find the Helmand river, ending up in the Hamun lake. The "creation" event took place before the Flood and the later catastrophic event referred to in the Bible as the "breaking of the earth" at Peleg's time. Both events may have resulted in quite a substantial rearrangement of the orography and of the course of rivers. Substantial modifications of a river course after relatively minor natural events or possibly moderate action by man are known to have occurred in recent times. One example is the change of the mouth of the Yellow River, which in the last millennium shifted north to south and then back to north of the Shantung peninsula, as a result of heavy floods. Another is the rearrangement of the course of the San Francisco in Brasil, see de Mahieu [22], that used to flow in a straight northern direction, where we now find the Piaui river, the eastern turn in Remano being possibly due to artificial work to drain via some rapids some large marshes in precolombian times (de Mahieu thesis is that the Templars used that waterway to import silver from the Tiahuanaco region).
- the PRT (Perath, Parot, Parot...) or "river of food/fertility", which flows through the Garden of Eden in the eastern part of Eden, is identified with the Hunza river. This river has a source just a few km from sources of the Mintaka and the Pandji (which one is *the source* of a river is an ill defined problem: the criterion of the maximum distance to the sea was almost impossible to apply in ancient times when accurate mapping was not available, and moreover is subject to changes due to landfalls and other geological effects; "religious" criteria, like the one defining the sources of the Ganges, are usually more significant from the point of view of the meaning of the river to man, but are generally inconsistent with the maximum length criterion). The Hunza river flows through the Hunza valley, a very special region for agricultural and anthropological considerations, for some 200 km, then continues through a deep and narrow valley for again some 100 km to Gilgit.

Transit from Gilgit to Hunza valley used to require, even in the 20th century, after the road improvements made by the British but before the construction of the modern Karakorum highway, about two weeks, using mules or horses. After Gilgit the rivers continues through the Kashmir till it joins the Indus, after a course of some 500 km.

THE OTHER geographical details are identified as follows:

- the city of Ashur is the "city of Asia", probably a city in the Karakol ("the black lake"), possibly the strategically located city now called *Tashkurgan*, meaning rather clearly *the gate (tash) to the mountains (kur) of the Garden of Eden (gan)*. The "Asia" may be related to both the transoxiana land of the "Asioi" referred to by classical geographers, as Pomponius Mela, or to the kingdom of the Azha, very important in the ancient history of Tibet, see Hummel [11].
- the land of Kush corresponds to present Hindukush, the word *kush* to be related either to the Sanskrit *ku* = *peak* (which is the standard academic interpretation) or to the Persian *kushtan* = *to kill*, which we prefer since it nicely relates to the story of Cain and Abel
- the land of Havilah is the present region of Kabul (called once Kabulistan, see De Claustre [12]), Havilah meaning possibly *land of Abel*; notice also that Kabul, believed by its inhabitants to be the oldest city in the world, possibly means *soul of Abel* (in [21] we gave arguments that *ka* is a word with worldwide meaning as *soul*,

person, people we can add that it means precisely *soul* in nahuatl, see de Mahieu [22])

- the eastern gate is identified with the north-east access to the Hunza valley, namely the Khunjerab pass, a name actually providing in the consonantic structure the Genesis information (*Cherubim* = *KRB* = *JRB*, *Khun* may be related with the ancient Turkish-Uighur word *khun*, meaning *shining divine Sun*).

In the following sections we will look to the geographical information on the place of "creation" that is available in several Sumerian texts, and, with reference to the "paradise", in the books of Enoch. The Sumerian texts either have come to us directly as texts predating Moses, the traditional author of Genesis, active, according to Velikovsky [13], in the 15th century BC, or in later texts, e.g. from the library of Assurbanipal, 7th century BC, that are more or less accurate Akkadian transcriptions of older Sumerian documents. The books of Enoch, expunged from the set of canonical sacred books by the Christian Church in the 4th century AD, were previously accepted and generally greatly estimated by the Church fathers (they are even now part of the Canon of the Ethiopian church). These books in their present version are dated usually at the second century BC. It is likely that such a date just refers to the surviving versions, where an ancient obsolete language was modernized. They were indeed considered, e.g. by St Augustin, as works of "hoary antiquity" and they do in fact deal with prediluvian events, about which only intriguing hints may be found in Genesis. That several texts dealing with very ancient events were once in circulation to be later completely lost, also follows from references in the Pentateuch to vanished books, e.g. *The wars of Jahweh*.

WE WILL CONSIDER in the next section the geographical data in the Sumerian creation texts, claiming that they are compatible with the geographic setting of Eden obtained from the Genesis data. The new sources provide elements that enrich our proposed scenario. Among the results that we obtain:

- the possible meaning of the word *Hunza*, till now unexplained by linguists or anthropologists (the Hunza or Hunzakut call themselves Bororo)
- the possible meaning of the name *Hunza Kunji*, referring to the highest peak in the massif where the four rivers are born
- the role in the creation story of the two great mountains that dominate, with a very intriguing geometry, the Hunza valley, namely the Hunza Kunji and the Rakaposhi
- the role in the creation story of the great chasm that separates the Hunza valley from the region of Gilgit
- a new geographic identification of the *Apsu*, which also provides additional arguments for the origin of the Sumerians from the heart of Asia
- the so called “cylinder of Nippur”, discovered in Nippur (about 80 km SE of Babylon) by American archaeologists at the beginning of the 20th century. The cylinder, whose surface is partly ruined (out of 320 lines only 170 can be read) has been dated at the first half of the third millennium BC, possibly the 27th century BC. A first tentative translation was given in 1918 by professor George A. Barton [14]. Due to unresolved difficulties in making sense of such text, it has been left out of later collections of texts on the origins, like those by Kramer [15], Bottero and Kramer [16], later referred to as B&K, and Pettinato [17]. For this work we have used the revised version of Barton’s translation proposed by C. O’ Brien [18] and by C. and B. O’ Brien [19], this last one later referred to as B&B. C. O’ Brien was a geologist, author of important monographs on the orogenesis of the Zagros and the Rocky Mountains. Having become fascinated with the ancient Middle East history during the many years he spent in Iran and Mesopotamia, he devoted much of his time (most of the last 40 years of his long life) to the study of Hebrew, Akkadian and Sumerian. Working with his wife, he was able to provide new translations of several problematic texts (including Genesis and the Phaistos disk), developing a new theory on the identity of the “gods” in ancient religions and traditions.
- The *Enuma Elish* (when over there...), or Epic of Creation, in the translation of B&K. First published by Smith [20] in 1875, this initially incomplete text was in time integrated by several findings in different places; an almost complete text is given in B&K. It is believed that the present form of the epics was written in the 12th century BC

2. Geographical information from Sumerian sources on Eden

WE HAVE looked at several Sumerian-Akkadian sources on the “creation” event and its location, including the following ones:

- The *Atrahasis* (*The great wise man*), which is a fundamental text also for the discussion of the Flood and of another catastrophe, before the Flood, involving a great epidemics. This poem may be dated in the present version at least to the 17th century BC.
- The so called *Bilingual Story* of human creation, see B&K section 39, dated at least to the 12th century BC
- *Nergal and Ereshkigal*, a story of relations and travels between the region of the gods and the underworld. The story has come to us in two versions, one usually dated at the paleo-babylonian time, circa the 18th century, the second one coming from a private library in Sultan Tepe has been dated at the 8th century BC.

EXCEPT FOR the cylinder of Nippur, we have used the translations in B&K.

The Sumerian story of the creation is much more complex, structured and informative than the story in Genesis. Here it is not the place for a thorough comparison of the two stories. For the further discussion, here we state our working hypothesis that *the ancient documents that we consider are based upon real events*, whose memory has survived, albeit with transmission errors in the oral and written versions and in the choice of the words. We will strive to find the invariant and significant elements surviving in the texts. With the specific reference to the differences between Genesis and the Sumerian-Akkadian text, our opinion is that the two stories refer basically to the same event, but from the point of view of two distinct lines of transmission: the line of the descendents of Adam and Eve, who survived the Flood in the eastern Anatolia region of Urartu, and the line of the descendants of the

prediluvian Sumerians, who before the Flood lived in cities in Central Asia (in another work [21] we have argued that the mount Nimush where Utnapishtim/Ziusudra survived should be identified with the Anye Machen massif, near the sources of the Yellow River). In other terms, it is our belief that Moses did not borrow the creation story from contacts with the Mesopotamian civilization. We think that this story was a common heritage of the descendants of Abraham, thus known not only by the Hebrews but also by the Madianites, where Moses spent many years (the Madianites were most probably descendants of Madian, son of Abraham and Keturah; Jethru, father in law of Moses, lived in Arabia near the city now called Medina, once called Yathrib, a city possibly founded by Madian).

The Sumerian creation story starts with the arrival in a certain place of a group of beings of “divine” nature, the Anunnaki (a word variously interpreted as *the great sons of light*, *the great sons of Anu*), with higher knowledge and technical skill than man. The region where they settle lies amid mountains and is called *Kursag*, also read *Kharsag*. In this word *kur* means “mountain”, *sag* according to B&K has no clear meaning, while according to O&O should mean *lofty enclosure*, close in meaning to the Genesis *gan* or *paradise*= *walled enclosure*.

The gods descending on Kharsag are a structured group, consisting, from Enuma Elish, of 600 members of the lower Igigi group, of 50 “great gods” and of 7 high chiefs, the *gods of destiny*. The Igigi appear to be divided sometimes between 300 located at the “sky” and 300 at the “Apsu”. The chief of the Anunnaki in the “sky” region is Enlil, whose name means “*Lord of the sky*” and also, according to O&O, “*Lord of cultivation*”). The lord of the Apsu is Enki, whose name means *lord of the*

lowland, and who is a brother of Enlil. A sister of Enlil, living in Kharsag, is Ninlin or Ninkarsag; she plays a fundamental role in the creation of *ullu*, the modern man. Finally we should quote the father of Enlil, Enki and Ninlin, namely the supreme chief of the gods, Anu. He lives far away "in the sky", but appears at Kharsag on special occasions.

IN KARSAG the Anunnaki become involved in a special project, namely the attempt to make water easily available for agricultural purposes by building canals and in particular by damming a local river. This work is the task of the Igigi, who spend many years on it, without being able to complete it. Tired of a work that they find too heavy, the Igigi rebel against Enlil. To quash the rebellion, Enlil, Enki and Ninlil decide to "create" man, to help in the heavy work of water management and in the agricultural activities. Man is therefore created as a worker, to be compensated with the fruits of the soil. It is intriguing to observe here how, according to Pettinato [23], the signs of the zodiac were known by the Sumerians well before they appeared in the other western sources, all with the same name as today, except the first one: *aries* is a wrong translation, explained by a little difference in the cuneiform script, of the Sumerian words *ullu hunga*, meaning *salaried man*. While Pettinato puts the origin of this term at the beginning of an economy where people would be hired for a salary, one might possibly consider also the hypothesis of a reference to the *ullu* created in Kharsag, subject to work in change of free vegetarian meals...thus instead of Aries the first sign should be the sign of the first man.

The creation of man, decided by Enlil, is implemented with a complex process well different from the process described in Genesis (but see O&O for a radically different translation of Genesis than the one

usually given). The "creation" is realized by a group of Anunnaki, under the direction of Ninlil and with the important help of Enki. The process involves using some vital material from one specially selected male Anunnaki, named *Weila* in the Atrahasis, *Xingu* in the Enuma Elish (VI,33), and results in the creation of seven couples. The specific details of the creation are called, in the Bilingual Text) B&K, text 39), "*a secret doctrine, that can be spoken only by experts*". A very important feature of the created man from a theological point of view and definitely going beyond anything stated in Genesis, is contained in the following three lines of Atrahasis, Karsap-Aya text, lines 215-217, B&K p. 571, our English version

Thanks to the divine flesh ,

a spirit will be alive in man,

that will be alive even after his death

IN THE SUMERIAN texts man continues to work with the gods for a substantial amount of time; no reference is made to a couple being expelled from Kharsag. Kharsag becomes apparently a settlement of model agriculture, with a dam and irrigation canals, various buildings including the palace of Enlil, the *Ekur*, breeding of animals (sheep, goat, cows) and rich orchards (quite curiously the Nippur cylinder, plate 4, claims that some "heavenly" fruit trees could not be cultivated successfully). The settlement thrives, disregarding some problems and fightings among the Anunnaki, for over a couple of thousand years. According to the Atrahasis a first crisis comes after less than 1200 years from "creation", when an epidemic devastates the settlement. The second crisis comes again less than 1200 years after the epidemic, being the Flood to which Ziusudra-Utnapishtim are

survivors. The interval between the creation and the Flood is thus given at circa 2300 years, which agrees very well with the estimate obtainable from the Septuaginta (the time when the first ten Patriarchs, from Adam to Noah, lived is circa 2600 years; since Noah outlived the Flood by about 300 years the estimates are close).

IT IS NOT HERE the place to comment in detail the creation story, see Appendix 2 for a brief discussion of possible interpretations.

We now look at the geographical information that can be gleaned from the Sumerian texts. We should point out that our investigation is by no means exhaustive.

- Kharsag is a settlement among the mountains, as its name says. The palace of Enlil is called Ekur, i.e. "palace of the mountains". The place is often contrasted with the lowland controlled by Enki, the region of the Apsu, and with the region controlled by Ereshkigal, the underworld. Such geographical data agree with our identification of the Garden of Eden as the high Hunza valley, but of course would also agree with very many other mountain places.
- The lord of the Anunnaki is Enlil. He would correspond to Yahweh as lord of the Elohim, if we could consider the world *elohim*, which is definitely a plural, as referring to a plurality of higher beings, and so not be, as in the standard interpretation of the three main monotheistic religions, a "*pluralis majestatis*". Now Enlil has another name, albeit less common, namely *enzu*, meaning *Lord of knowledge*, see O&O, p. 68. The phonetic analogy between Enzu and Hunza suggests that

the present name Hunza, whose meaning as far as we know is unknown to anthropologists and to linguists, preserves the memory of the ancient god who according to the Sumerian texts presided there to the "creation" event. It is also a tradition of the Hunza people that they entered the valley only relatively recently from the west, i.e. from Badakshan (but Mandel conjectures that the tribes in the high Kashmir may be remnants of people from the Indus civilization, who fled the Arian invasion, see [41]). They also believe that some of their ancestors were Alexander the Great soldiers, quite a possibility since Alexander spent three years in Bactriana and Sogdiana, the regions of the Persian empire that gave the strongest resistance to his army. We may therefore surmise that the Hunza valley, which can be accessed with great difficulty from the south, remained empty of people for a long time after the Flood, but that the memory of its unique place in human history was preserved by the surrounding people, especially those living in the valleys more easily accessible via the Kilik, Mintaka and Khunjerab passes. Evidence of transit between Gilgit and the Khunjerab pass was amply obtained during the works of construction of the Karakorum highway, when thousand of petroglyphs showing human figures were found, the most ancient having been dated to the fourth millennium BC, see Uhlig [43]. The first evidence that the Hunza river valley constituted the southern branch of the silk road was obtained in 1942 by the great explorer Aurel Stein, then an octagenarian, who found petroglyphs he dated at the second millennium BC.

- Kharsag is a fertile land, but requires substantial and difficult work for

irrigation and control of water. Such a work, in the epics, is so tiring that, initially in charge of the Igigi, it leads to their rebellion and hence to the decision to create man, *ullu*, as a worker. This scenario fits perfectly the Hunza valley. The Karakorum mountains have plenty of glaciers and snowfields, and there are reasons to believe that they were more extended several thousand years ago (the creation story may be set at circa 5500 BC on reasons that cannot be developed here; such estimate by the way already appears in a fragment of Julius Africanus *Chronography*, preserved by the 8th century Byzantine writer Georgius Syncellus; Africanus also gives 2262 years from Adam to the Flood, in excellent agreement with the estimate from Atrahasis). However the bottom valleys are usually very dry, the monsoons (we are close to their northern limit) discharging mainly on the high mountains. Due to this lack of rain the Hunza people have built a complex system of canals, called “kuls”, of several km length, depth and widths about one meter, crossing rocky obstacles via tunnels. Perhaps more importantly the Hunza river flows in a deeply excavated bed, in some places over two hundred meters deep. The river effectively divides the Hunza valley into two separate regions, inhabited by different tribes speaking different dialects, having different characters and adhering to different professions of Islam (one sunni, the other ismaelite). The great and difficult work of the Igigi before their rebellion makes much sense in this context, as a project to dam the Hunza river in the eastern part of the valley to provide easier access to water for irrigation. One may surmise that if any archaeological evidence will ever come of Eden in Hunza, it will be in the form of traces of the dam built along the

river (albeit there is the strong possibility that nothing was left after the Flood). Finally, a line in Atrahasis, I/25, suggests that canalization work was not limited to the Hunza valley, but also was done along the Mintaka river (referred as Tigris), hence in the Karakol. This statement suggests that the expansion from Kharsag/Hunza was in the northern direction, leading, via the valley of the Mintaka, to the great basin of the Takla Makan and Lop Nor that, as we will now argue, was at that time filled with water and constituted the Apsu.

WE WILL DISCUSS later from the Enoch texts geographical evidence pointing to two great and special mountains that dominate the Hunza valley from both sides of the river. We will now look at other geographical features, associated with Kharsag but lying at some distance.

The main region associated with Kharsag and generally with the prediluvian world is the *Apsu*, under the control of Enki. Here are some of the features of the Apsu; additional ones could certainly be obtained by a fuller search of the Sumerian literature:

- the Apsu is characterized by being a basin of sweet water. We establish that its waters are sweet by its name (AP=AB=A= water in Persian, Sanskrit and Sumerian; SU = sweet, good, in Sanskrit) and by the explicit statement (lines 75-79 of poem 4 in B&K, *Enki in Nippur*) that carps lived in its waters
- the prediluvian city of Eridu was built on the border of Apsu. This statement is intriguing because the excavated Eridu in Mesopotamia lies about 200 km from the sea line (it is believed that the sea line has not changed much since Sumerian times)

- the Apsu, where Enki settled, is also associated with the region of *Dilmun/Tilmun*, defined to be a place of “purity and light”, see poem 5, *Enki and Ninhursag*, in B&K. Dilmun is also stated to be located beyond the sea, where the sun rises. It is also the place where Ziusudra/Utnapishtim, the survivor of the Flood, settled, see poem 46 in B&K, based on a tablet found in Nippur.

The second geographical region associated with the Kharsag is the *underworld*, where the goddess Ereshkigal, sister of Enlil and Enki, is the lord. A visit to the underworld is described in the poem *Nergal and Ereshkigal*, n. 26 in B&K. Among the features of the underworld:

- it is dark, sunshine does not reach there
- one can go there, but to return is almost impossible
- it is connected with the “gate of Anu, Enlil and Ea (Enki)” by a “long stair of the sky”.

WE GIVE NOW an interpretation of the Apsu and the underworld that agrees very well with the geography of that part of Central Asia where the Hunza valley is located. First, we identify the Apsu with the huge inner sea that until a few thousand years ago filled the presently desertic depressions of Takla Makan and Lop Nor, the first a desert with great sandy dunes, the second a steppe type desert full of salty flats. It is a recent fundamental discovery based upon the analysis of satellites pictures, due to the Turkish geomorphologist Eroz Orgul, see Pittman and Ryan [24], that the said deserts were filled with water for a substantial depth until about the second millennium BC. The

“creation” event being datable at the sixth millennium BC, we would then be in presence of a substantial water basin, of the order one million square km, in the very heart of Asia, surrounded by the Kunlun range in the south, by the Pamir-Tianshan in the west and north, by the Nanshan in the east. All these are mighty mountain ranges, reaching in many places over 6000 meters. Further we should notice:

- the waters, stated in the texts to be sweet, are expected to have been so, since they probably formed in the tenth millennium BC at the time of the rapid worldwide melting of glaciers, in this case of the glaciers over the Tibetan plateau and the surrounding great chain of mountains; the water produced by such melting had no outlet to the ocean and accumulated in the Takla Makan and Lop Nor basin. Additional water of celestial origin may have arrived later from planet Mars if the catastrophic scenarios developed by Velikovsky [3], De Grazia [4] and Ackerman [7,8] are correct. The main catastrophe after “creation” has been the Flood, that most probably implied some tsunamic invasion of continents by salty oceanic waters. The Takla Makan and Lop Nor basin are far inside the Asian continent and well protected by high mountain ranges against tsunamic event, a fact that suggests that the origin of the water of Apsu was mainly not oceanic (against for instance the origin of the waters of the Caspian sea). A limited amount of oceanic water may have reached there and contributed to the salt found in the flats of the Lop Nor.
- the basin surface, viewed from the surrounding high mountains, was very low, thousand meters below the mountain ridges, thereby giving to Apsu the additional meaning of “abyss” or “subterranean sea”

- the basin, being located far from the oceans and being moreover surrounded by high mountains, was bound to be a dry area, where evaporation would greatly exceed the amount of water brought by rains. Thus the Apsu was destined to disappear in time and its level would significantly drop even over a moderate span of time. This fact would explain several passages in the Sumerian texts where irrigation works play a fundamental role in the economy of the land
- the dry weather would nicely explain the qualification of Dilmun as a place of especially luminous sky. This quality is not true for most days in Mesopotamia, which is affected very often by haze due to the humidity coming from the Persian Gulf and by dust flown from the western deserts of Arabia Deserta. The same consideration holds for the often proposed identification of Dilmun with Bahrein (notice that an eastern location was considered by already Kramer, who suggested the Indus-Sarasvati basin). It is however reasonable that in postdiluvian times the name Dilmun would be given to some eastern land with which trade was possible by ships. There are indeed indications of contacts by sea with far away lands in the first, second and third millennium BC, see [33], i.e. :
 - a Lagash tablet, circa 2500 BC, refers to ships from Dilmun with a cargo of wood
 - a document of circa 1800 BC refers to an expedition to get copper in Dilmun

- Sargon of Assyria, end of 8th century BC, receives gifts from the king of Dilmun

IT IS OUR HYPOTHESIS that the Sumerians, who called themselves *black heads* (which is exactly the name the Tibetans give to themselves, *bod pa*, as stated in the books of Alexandra David-Néel) lived in the Apsu-Dilmun region before the Flood, survived the Flood in the Anye Machen region, near Dilmun or part of Dilmun, and then moved to Mesopotamia probably by the way of India; some of them may have remained there (we have in mind the Pani, an ancient Indian population involved in maritime trade; remember that boat technology had to be well developed in the Apsu region!).

- from the Flood story in the epics of Gilgamesh, see poem 48 in B&K, we deduce that Utnapishtim (Ziusudra in older Sumerian stories) leaves his city of Shurruapak, descends to the Apsu and builds there his boat. This is an indication in our scenario that the prediluvian Shurruapak was located at some distance from the basin filling the Takla Makan and Lob Nor depressions, a possible indication that substantial lowering of the Apsu had taken place since the construction of the city. In the *Poem of Erra* (n. 51 in B&K) we have the intriguing statement that the city of Sippar, where Utnapishtim hid important books in a safe place before the Flood, escaped the destruction by water during the Flood but was otherwise devastated, apparently by earthquake

of Sippar, ancient city

whose territory the Lord of the Earth

preserved from the Flood,

against the will of Shamash, its lord,

you destroyed both the walls and their foundations

Since the Flood must have implied a uniform rise of the waters of the Apsu, we deduce that Sippar was located higher than Shurruapak from the shoreline of the Apsu, hence it was probably built before (under the hypothesis that cities were preferably built near the shoreline of this sweet water basin); thus, while it could escape being flooded, since the rise of the level of the Apsu was limited, it could not escape the global earthquake that must have characterized the Flood event, to be discussed in a forthcoming paper [25].

WE CONCLUDE this section with our interpretation of the underworld. We have noted that the Hunza valley was historically almost isolated, especially with respect to the access from the south, since the way to Gilgit goes through a deep, narrow and dangerous chasm. We are led to the hypothesis that the underworld refers geographically exactly to the chasm between Hunza and Gilgit. We can see here indeed the following features of the mythological underworld:

- it is dark, being mostly a very narrow canyon 2 to 3 km deep. For most of the day the light of the sun would not reach the bottom. Since the latitude is about 36°, the sun would never be at the zenith

- going down would not be easy, going up would be more difficult
- access to it would require building trails along very steep mountain sides, very often with stairs indented in the rock, hence the description of the *stairway* going to the sky. The trail from Gilgit to Hunza was known before construction of the modern road as the “trail of bridges”, due to the many narrow and dangerous rope bridges needed to pass from one side to the other of the steep almost impassable valley walls.

We note that in the Enochian texts, see next section, the underworld is a place of punishment not for man but for the Angels/Watchers, who violated their duties by copulating with human females and providing man with information not to be divulged. In the Enochian underworld there is fire, and rivers of fire are seen by Enoch during his trip to this region. Here we notice that the chasm between Hunza and Gilgit lies in the western Karakorum (*black rocks*) reaches, mainly consisting of granite, a very ancient volcanic rock. We have been unable to ascertain whether the region contains recently deposited volcanic rock. The chasm lies however also south of the Rakaposhi mountain, at which basis hot water sources are found, see Tilman [32]. They indicate a magmatic activity going on not too deeply, a sign of possible surface magmatic events before the Flood.

3. Geographical information on Paradise in the book of Enoch

As said before, the book of Enoch, considered by St Augustin to be of “hoary antiquity”, respected and cited by the early Church Fathers, was not included in the

Canon of the Christian Church, which meant its doom and oblivion. The last quotation in ancient times was by Syncellus, circa 800 AD. The book however survived on the periphery of Christianity, particularly in Ethiopia, where many ancient documents and traditions escaped the ostracism that affected them in the former Roman world. Two copies of the Enoch book were found and brought to Europe by the great Scottish explorer and leader of Masonry James Bruce, who entered Ethiopia from Massaua in 1760 and left it by the way of the Blue Nile and Egypt in 1733, see [26]. Other versions of Enoch book, the so called Slavic Enoch, have been found in five manuscripts in monasteries of Serbia and Russia, the oldest dating at the 15th century. The origin of these Slavic books is obscure. They might have been preserved by some Jewish scholars (fragments of Enoch have also been found in Qumram) or may have arrived from Armenia, another region escaping the control of the Roman church, via the Bogomils, who from their first settlement in Bulgaria spread throughout the Balkans (wherefrom they may have influenced the Cathars and the Templars). The Slavic Enoch is much smaller, about one third, than the Ethiopian Enoch (which seems to contain also material from the once independent books of Noah and Methuselah). Scholars usually value the Slavic Enoch as the closest to the original text. The best known translation is still the one made by Charles in 1896. We have used the translation into Italian of all Enoch books recently provided by Pincherle [28]. We indicate by EE the Ethiopian Enoch, by ES the Slavic Enoch.

ENOCH IS the seventh in the line of the ten prediluvian Patriarchs (Adam, Seth, Enos, Cainan, Malaleel, Jared, Enoch, Methuselah, Lamech, Noah); notice that the span of time covered by these Patriarchs is given in the Septuaginta as about 2630

years; since Noah survived the Flood by about 300 years, this provides about 2300 years between the "creation" and the Flood, as in the Atrahasis.

SOME DATA about the life of Enoch are the following:

- he lives in a place called Acuzan (ES, 54/2), possibly, from the interpretation in O&O, in the valley of the river Dan, south of Mount Hermon, in Palestine
- he is a man of justice and knowledge and he can write; his name, "Hanukk" means "the initiated" and he is called by his people "Enoch the scribe". Here we should notice that forms of writing predating the earliest official written texts (Egyptian hieroglyphic and Sumerian cuneiform texts) by at least two thousand years have been found both in the Balkans (on polished bones) and in the middle Yellow River valley (engraved on tombstones and in the special writing that until a couple of generations ago was still used, but only by women, who also had their own special language, remembering the female-only language *eme sal* of the Sumerians). A tradition preserved by the Persian historian Al Tabari [31] maintains that Adam was able to write
- during Enoch life, 200 "angels", also called "watchers", descend on Mount Hermon, led by Shemyaza. These angels are attracted by the most beautiful of the human females. They seduce them and take them as wives. Their children are "giants" of an evil nature; they

attack man, even eat their flesh, create immense disturbance. Then the High Lord decides to punish them, sending against them the archangel Michael. In vain the watchers try to enlist the help of the righteous Enoch to avoid their punishment. They are defeated, lose their freedom and are relegated to a hellish prison, full of fire, to await their final judgment. This story, amply developed in Enoch, is only hinted to in Genesis, where it is said that the Nephilim took women as wives and generated giants

- one day he is visited by two tall and shining beings, who take him by a special craft to the dominion of the High Lord. During the trip – which has been variously interpreted as a vision or an actual space trip – he has visions both of earth features from the high and of the surroundings of our planet. He enters the splendid palace of the Lord and meets the Lord himself. There he is taught many things about angels, archangels and the future of mankind, including the Flood
- after his return, he writes what he has seen and was taught in 366 books (ES 23/6), given to his son Methuselah (a successor of Seth in the order of Melchisedek according to Ethiopian sources). These books will remain secret till the end of human times (ES 33/11) and will survive the Flood (ES 33/12). We may refer here to the theory of Pincherle [39] that they have been hidden inside the Great Pyramid of Giza; notice that Duranti [29] has claimed on astronomical considerations that at least the lower part of the Great Pyramid

was completed by the year 3440 BC (about 250 years before our estimated date for the Flood).

- Enoch is taken again to “the sky” in a second trip, never to return to his people; he is therefore, with Eliah, one of the two persons in the Bible who are claimed not to have died on earth. He is however once visited in his new abode by his son Methuselah on the occasion of the birth of Noah (Noah was born with white hair, shining eyes and a big body; his father Lamech was scared and afraid that he might be the son of a Watcher; Enoch tells Methuselah that Lamech should not worry, that Noah is his son and is destined to save mankind from the Flood).

IT IS OF COURSE very difficult to deal with a text like Enoch, arrived to us in versions very late with the respect to the described events and certainly seriously affected by later revisions. It is also quite a problem to decide which sense to give to a text involving contacts with angels, of both good and evil nature, and the meeting with the High Lord after what at face value appears to be a space travel. Most commentators would give to the Enoch texts only a symbolic, allegorical value, but see O&O for an interpretation in realistic terms.

Now we will look at some geographical features from the “aerial travel” of Enoch, concerning our identification of Eden/Kharsag/Paradise with the Hunza valley. The following lines (EE, 26/1-5) are of special interest

1 - From there I reached the center of earth and saw a blessed place with trees in bloom

2- *There I saw a holy mountain; east of it a river was flowing to the south*

3- *To the east I saw a high mountain; a deep and narrow valley was between the two mountains*

4 - *West of this mountain was a lower mountain, with a deep and dry valley between the three mountains*

5 - *The valley was deep, narrow, only hard rock, without trees.*

This is our interpretation in the framework of the Hunza area complex:

1 – The blessed place with trees is the Hunza valley, identified with the Garden of Eden; the definition “center of the world” is not inappropriate, being this area the place where four great rivers are born and four mighty mountain ranges converge. If an airship would approach Earth from space, this region would certainly come to special attention due to these features!

2 - The holy mountain west of a river can be identified with the Pasu Group, dominating the massif where the four rivers are born. The highest peak here, in a series of peaks of almost the same height, is called Hunza Kunji. According to Maraini [30], “kunshi” is a much used Tibetan word meaning “the creator of all”(the standard spelling, has noted Vogliotti to us, would be *kungzhi*, meaning *the first cause, the original nature, the spirit*). From our previous identification of the meaning of Hunza, we can thus surmise for “Hunza Kunji” the meaning “*The Lord of knowledge, the creator of all*”, this being a reference, in the Sumerian context, to Enlil, if not Anu. Thus within the context of the Sumerian tales, this mountain might be identified with the *mountain of assembly*,

the place where Anu descended when he had to attend emergency meetings

3 - The highest peak in the east can be identified with the Rakaposhi, that dominates in height a group of several tall mountains. This mountain has a very definite pyramidal shape, dominates the valley especially when seen by people who descend from the northern passes (Mintaka, Kilik), is white shining being covered with ice, was considered not climbable for many years (it was climbed the first time in 1958). It is considered sacred by the Hunza people, who call it with the name Dumani, meaning “necklace of clouds”. The name Rakaposhi has no certain meaning and this mountains is not known to have been referred to in the literature. We propose the etymology “*border of the people of God*”, from the relations POSHI= border (root PSH in Pishon, Peshawar...), KA=people, RA=God. See also Appendix 4.

4,5 – The narrow and deep valley may be related to the chasm between Hunza and Gilgit, that we discussed in relation with the underworld, closed on the southern side by much lower mountains, on the north by the Rakaposhi). We already noticed that the presence of sources of hot water on the way to the Rakaposhi suggests past volcanic activity. This would explain several passages in the Enochian texts about fire in the region that he visited.

Conclusion

OUR ANALYSIS has shown a compatibility between the geography in the Sumerian sources about Kharsag and the Enochian information about Paradise, with the location that we have previously suggested for the Garden of Eden described in the Bible book of Genesis. Our approach is based upon the hypothesis that the considered texts preserve a memory of real

events. Further research should include a fuller search of the Sumerian-Akkadian sources and of Jewish sources (Qumram, Talmud, Midrash, Legends). Moreover it would be extremely important to look at any surviving traditions among the people in the Karakorum-Hindukush-Pamir-Kunlun region. Some of these people, e.g. the so called Kafiri of the Kafiristan region between Pakistan and Afghanistan, have been isolated for millennia and were only recently forced to convert to Islam, see Maraini [34].

Appendix 1. Who were the Anunnaki?

IN GENESIS we find two names associated with divinity, Elohim and Yahveh, the first being a plural, meaning "the shining ones", but usually translated as a singular, via the *pluralis majestatis* interpretation, hence as another name of God = Yahveh. In the books of Enoch we are presented with Angels and Archangels (with detailed classification of their role in the celestial abode), fallen Angels and the Lord of the High. In the Sumerian texts we meet the Annunaki, *Great Sons of the Light*, with their tripartite division.

The question naturally arises about who are the "god, gods" of the considered texts. We just consider a list of some possible answers:

1. The positivistic answer, dominating the scientific and academic world: the gods are inventions of the religious authorities, who have to provide an answer to the eternal questions: who we are? where do we come from? What will happen of us after death?
2. The answer of the modern religions, in particular the three monotheistic religions of Hebraism, Christianity and Islam: the unique God has directly operated on Earth, possibly with the help of his Angels, to create man, a union of a physical body and a spiritual soul. From this answer the rejection follows of the detailed interactions between man and gods appearing in the "pagan" religions, unless the "gods" are interpreted as devils, which was the usual stand of the Church Fathers. Hence the systematic destruction of ancient documents by Christians (the bonfire of the magician books in Tarsus by Paul; a first destruction of the Alexandria library under Theodosius; the bonfires of the Mayan codices in Mexico by Diego de Landa; the destruction of almost all the 8000 rongorongo tablets still existing in Easter Island last century, only 21 are left...) and by Islam (the final destruction of the Alexandria library in the 7th century; the devastation of the Hindu temples and libraries in northern India; the destruction in Asir of the holy place of the cult of El Ais by Ibn Saud at the beginning of the 20th century).
3. The hypothesis of authors as Collins [37] or Hancock [38] that the "gods" are deified human beings, survivors of a previous higher civilization destroyed by a catastrophe, typically the civilization of Atlantis dated at the time set by Plato, circa 9500 BC.
4. The hypothesis of O&O, amply developed in the substantial monograph [19], where the traces of the Shining Ones are followed throughout the world, that the "gods" are superior beings, originating from what a school of Sikh mystics calls "*causal and astral regions*". These beings are deemed to have visited the Earth in the period between the end of the last glaciation and the first millennium BC. Man would be the result of a hybridization process between such beings and the

pre-existing Cro Magnon man. Agriculture would have been the result of their teaching.

interstellar travel due to the speed of light limit is no more valid, see Van Flandern [42].

5. It is a thesis of De Grazia [5] that "gods" exist in many places of the universe, this term defining classes of intelligent beings, a class endowed with higher intelligence being considered of "gods" by a less endowed class. The "gods" of ancient traditions might therefore be interpreted as visitors to our planet from another planet with more advanced intelligent life. A further step can be taken within the scenario developed by Ackerman [7,8], who describes the birth of Venus a few millennia ago in the context of catastrophic interactions with Earth and Mars. Ackerman posits that Mars was previously within the habitable zone, wherefrom it was expelled by Venus, reaching its present orbit around 700 BC after several close interactions with Earth, as independently argued before by Velikovsky [3] and De Grazia [4]. He assumes that Mars had water, a significant atmosphere and life; this biosphere would have been lost during the catastrophic events that affected Mars before it settled in its present orbit in a non habitable zone. If we assume that life included also intelligent life more advanced than the level reached at that time by man, then two hypothesis should be considered naturally:
 - That the intelligent beings in Mars, possessing sufficiently advanced space technology, left Mars towards habitable planets of other stars with parameters similar to those characterizing Mars (even a very advanced civilization would be impotent vis-à-vis a collision or a quasi collision with another planet); the usual objection against
 - A small number of the Mars people visited Earth in several occasions, and particularly at the time of the catastrophic events in the period of the Venus-Mars close passages (albeit Earth was affected less than Mars). They improved man by hybridization, taught various techniques and laws of social organization, possibly even brought from Mars plants not previously existing on Earth. Then they left when the catastrophic time ended, circa 700 BC.
6. AS A VARIATION of the above scenario which does not assume presence of advanced intelligent life on Mars but on one or more planets of stars in our part of the galaxy, one may hypothesize that the very special events that affected the solar system for several thousand years, described by Velikovsky, De Grazia and Ackerman, may have attracted to the solar system visitors from one of such inhabited planet. These visitors inter alia would have interacted with man via genetic modifications (of the type we are close to be able to implement ourselves) and cultural influence. It should be noted that intelligent beings with a scientific development just a few hundred (but it could be many millennia or million) years more advanced than ours should be capable at least of the following feats:
 - full knowledge of DNA and capacity of modifying it,

obtaining e.g. a longer span of life

- detailed knowledge of the planetary systems in the galaxy
- capacity of travelling to other planetary systems, either at superluminal speed (if this fact is not physically impossible) or at close to the light speed; in such a case the long span of life would make the time of travel not the big problem that now seems to make such trips out of reach of man.

Appendix 2. One Eve or seven Eves?

ACCORDING TO Genesis, one couple is created in the Garden of Eve: Adam first, then Eve, by a curious process that involves a rib of Adam. Eve is called “flesh of the flesh” of Adam. There are worldwide several traditions of mankind descending from a single couple and it is sometimes specified, e.g. for the primordial couple of Fuxi and Nawa, referred to in Chinese traditions, that they were twins.

Just as an intriguing thought, let us note the following facts about the creation of Eve as described in Genesis:

- Ribs are among the human bones with the highest content of staminal cells, which are clonable
- a normal clone of Adam would be another male; now a male has a Y and an X chromosome, while a female has two X chromosomes; hence it would appear within reaches of genetic engineering that a female cell could be obtained from two male cells, substituting

the Y chromosome of one with a second X from the other cell. Creating a male cell from female cells would t be a much more complex genetic engineering feat.

IN THE SUMERIAN tale, seven couples are created. It is another intriguing observation that from recent mitochondrial analysis, see Sykes [35], the population of at least Europe and the Mediterranean region can be clustered into seven groups, each one deriving from a single female ancestor. However these women ancestors are not dated at the same time, so it is not possible to straightforwardly identify them with the seven women of the creation in Kharsag (albeit it must be said that the dating of the ancestor is very tentative, based upon some tentative extrapolations from mutation rates in fast breeding animals; it could be completely wrong under the catastrophic scenario of recent evolution of the solar system developed by Velikovsky, De Grazia and Ackerman).

A striking difference between the Genesis and the Sumerian creation story is the presence of one couple versus seven couples. A possible way out of this problem is that the woman of one couple died and was substituted by a newly “created” younger woman, Eve, a clone of Adam. The new couple felt to be special, aimed at a special role within the small community, was envied by the others, and was finally expelled. That Adam had a previous wife before Eve is actually stated in some Jewish ancient traditions, where such a woman is given the name *Lilith* and is considered as a demoness.

Appendix 3: The location of the prediluvian Sumerian cities

OUR DISCUSSION of Apsu has taken us to times much later than the creation event.

We know from Sumerian texts that several cities existed before the Flood (three gods are even claimed to have reigned in Bad Tibira for 108.000 years, see [40]); we also know from Genesis that cities were build and metallurgy had been developed in the land settled by the descendents of Cain, the land of *Nod*, that we in [1] identified with the heart of Asia. From the previous scenario and our work in [1] we are led to a tentative identification of the location of the following prediluvian cities of the Sumerian tradition:

- Uruk is the same as biblical Ashur, the “city of Asia”; thus it is possibly present Tashkurgan in the Karakol
- Nippur, being associated with the Ekur, the mountain palace of Enlil, was probably the main settlement in the Hunza valley
- Bad Tibira was located in Badakshan, at a place convenient for trade and for working the lapis lazuli of the Blue Mountain (and possibly work of the jade imported from the region of Khotan)
- Shurruk was in present Xinjiang, probably at some distance from the southern shore of the Apsu
- Sippar was also in Xinjiang, or possibly near the flooded basin of Tsaidam, in Xinghai.

Despite the immense devastation brought by the Flood, it is not impossible that remains of these cities may be found. These cities were anyway reconstructed in Mesopotamia, the region where after the Flood the Sumerians migrated (from Dilmun). The well known ruins of these cities lie over a sterile layer of alluvial sand,

first discovered by Woolley, below which are found remains of cities of a different civilization, the Ubaitic one, also present in Bahrein and in the Arabian peninsula. One should observe that Central Asia is still an almost virgin land for archaeological research. The recent discoveries of huge cities of the first/second millennium BC in Xinjiang (Loulan, Miran...) and of the third millennium BC in Turkmenistan and Tagikistan (in the so called BAM, Bactriana/Margiana complex) suggest that we are approaching an important revision of the established scenarios on the historical/geographical development of civilization.

Appendix 4. A reference to Rakaposhi and Hunza Kunji in Hurrian and Hittite mythology?

THE HURRIANS are a people that are present on the scenario of the Middle East from the second half of the third millennium BC to the first half of the first millennium BC. They were located between present Turkey and Syria near the Mediterranean. Their language, poorly known, is of the agglutinant type (like Sumerian, Turkish or Mongolian), which may point to an origin from Central Asia. Their religion had some connection with the Sumerian/Akkadian religion, some of the main texts of these people, e.g. the epics of Gilgamesh, having been found translated into Hurrian. See Imparati [44] for a review of the knowledge about Hurrians in the sixties .

In our discussion of the Hunza valley as the possible location of the Garden of Eden of Genesis, of Kharsag of Sumerian texts and of Paradise of Enoch, we have noticed the special feature provided by the twin mountains Hunza Kunji and Rakaposhi, located on the same meridian and with virtually the same elevation. It is therefore of interest to notice that a reference to two

holy mountains appears in the Hurrian mythology: the god Tessub, god of the high peaks, usually considered to correspond to the Akkadian god Adad, is claimed to advance between two divine mountains, one named HAZZI (perhaps a connection with Hunza Kunji ?), the other named NANNI (perhaps related with the Hunzakut name of Rakaposhi, DU-MANI = DU-NANI ?).

Furthermore, in the great rocky sanctuary of Yazilikaya, close to the Hittite capital Hattusa, where most of the shown divinities are actually from the Hurrian pantheon, the Hittite king Tudhalija IV is shown standing with his feet on two sacred mountains.

Riassunto

In questo saggio consideriamo le informazioni di tipo geografico relative al luogo della creazione dell' uomo contenute nei testi sumero-accadici e nel libro di Enoch.

Tenuto conto della nostra precedente identificazione del giardino dell' Eden con la valle di Hunza nel Pakistan, mostriamo come i dati delle fonti qui considerati siano in accordo con la nostra precedente identificazione, portando inoltre ulteriori elementi informativi, quali il possibile significato della parola Hunza (da Enzu, secondo nome del dio Enlil, significante "signore della conoscenza") e la possibile origine della qualificazione dell' inferno quale luogo sotterraneo, buio e caldo.

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Acknowledgements

Work partly supported by MAF and Fondi Ateneo 2002. Thanks are due to Antonio Agriesti, Michele Manher and Guido Vogliotti for useful comments.

SHORT SAROS AND LONG SAROS

by

Emilio Spedicato

Dedicated to

Alexander Poliistor and Moses of Korene

Summary

In this paper we observe that the chronology of the antediluvian kings in the Berossus list as received via Alexander Poliistor and Syncellus becomes compatible with the chronology of the antediluvian patriarchs given e.g. in Moses of Korene if the saros in Berossus is taken not as the long saros of 3600 years but as the much shorter saros of circa 20 years associated with the periodicity of lunar and solar eclipses.

1. Long saros and short saros

THE TERM *saros* applies to two different time units:

1 – the *long saros*, defining a period of 3600 years, divided in 6 *neros* of 600 years each and in 60 *soisos* of 60 years each. These three units are referred to for instance in Alexander Poliistor (first century BC), quoted by the Byzantine historian Syncellus. Poliistor apparently refers to statements in the lost *Babylonika* of Berossus, third century BC, book II, paragraph 1.2. The origin of the long saros is not clear. It might refer to a long planetary period, e.g. the period of the hypothesized planet *Nibiru* that has played such an important role in the books of the

scholar Sitchin (partly based upon the work of the Russian mathematician Agriest, virtually unknown in the west, but referred to in unpublished work of Velikovsky). In a future work we will embed planet Nibiru in a solar system catastrophic scenario. This starts with the explosion, circa 3.2 million years ago, of a planet in the region of the present asteroid belt (strong arguments for this explosion have been given by Van Flandern [1]), generating inter alia Nibiru, and reaches its catastrophic climax as far as Earth is concerned at about 9500 BC. At that time, corresponding to the end of the glaciation and of the Atlantis civilization, Nibiru passed close to the Earth, losing to our planet a satellite that became our Moon. Then circa 7500 BC Nibiru impacted

Jupiter (in the point where is now the red spot), generating from the impact material planet Venus *inter alia*, a scenario suggested by the work of Velikovsky [2] and later amply developed in two monographs of Ackerman [3,4], based to a large extent upon the Rig Vedas and the Surya Siddhanta.

2 – the *short saros* (later in this section we drop the qualification *short*), presently corresponding to 18 years and 10 days (or possibly 11, depending on how many leap years are contained in a given saros), related to the fact that lunar/solar eclipses are possible only when the Moon is close to one of the nodes of its orbit (i.e. the points where the lunar orbit, which lies on a plane displaced by 5 degrees from the ecliptic plane, intersects the ecliptic plane, where the Earth orbit lies). Now the sequence of nodes repeats itself every saros, implying that the saros typically defines the interval between two successive lunar/solar eclipses in a given point of the Earth. Higher order effects describe more complex features of the saros, including the fact that after about 1250 years it ceases to exist, restarting from a different year. It is also to be noticed that the saros gives the period between two passages of the Moon at shortest distance. The saros was known to ancient Babylonians probably already at the beginning of the first millennium and also to Thales around 585 BC, see [5].

IT CAN BE OBSERVED that 3 short saros correspond to 54 years, 54 being a “sacred” number in many ancient (and even in some modern) traditions, see Spedicato [6] for a collection of occurrences of 54 worldwide, and Patten and Windsor [7] for the hypothesis that 54 was for many centuries the interval between two successive passages of Mars close to our planet.

2. The interval between creation and the Great Deluge in Sumerian and Biblical sources

WE CONSIDER now the length of the interval between the “creation” of man (seven couples in the Sumerian/Akkadian traditions, one in Genesis, the first book of the Pentateuch) and the Great Deluge that according to both the quoted traditions (and to many other worldwide traditions: at least 600 have been counted) affected Earth, destroying most of the human race, but leaving a number of survivors, among whom Noah is named in Genesis, Ziusudra/Utnapishtim in the Sumerian/Akkadian texts, Manu in the Avesta. Notice that the quoted survivors should not be considered as the same person, see the arguments in Spedicato [8,9,10,11].

The interval between the two events is given as follows:

1 – in the Jerusalem Bible, based upon the version of the Torah available to the tribe of Judah as written down by Esdra in the 5th century BC, at circa 1650 years (same date in the Samaritan Bible, which is based upon the Esdra Bible)

2 – in the Septuaginta, the Greek version of the Bible produced in the 3rd century BC in Alexandria by 72 senior scholars called by Ptolemy Philadelphus, 6 from each of the 12 tribes, at circa 2256 years

3 – in Iulius Africanus, Fragment III, 5, of his Chronography, at 2262 years, with the list of the 10 antedeluvian patriarchs, from Adam to Noah

4 – in Moses Korenesis *History of the Armenians*, written circa 460 AD using the Septuaginta, the Armenian Bible and the immense archives of the royal palace in Edessa, at 2242 years. His list differs from that of Africanus in the statement that Lamech was born when Mathusalah was 167 years old, while he was 187 according to Africanus. Since Africanus has survived in second hand fragments it is likely that

Moses preserves ancient information more accurately

5 – in the Atrahasis, an Akkadian text whose extant version goes back probably to the 17th century BC, see Bottero and Kramer [12], it is stated that less than 1200 years elapsed between the “creation” and a great epidemics (that can be easily explained within the catastrophic scenario developed by Ackerman as caused by to viral and bacterial material reaching Earth from Mars, at the time of the first close interaction of our planet with Mars) and that again less than 1200 years passed between the great epidemics and the Great Deluge.

THE ABOVE ESTIMATES are quite in agreement among them, especially if we notice that the Jerusalem Bible is probably less accurate than the Septuaginta (the favoured text used by the Fathers of the Church), because of the following reasons:

a – the tribe of Judah lost almost the entire corpus of high priests during the kingdom of Manasses, when this king left his fathers religion and killed most of the priests, to revert to the monotheism after several years. Now in ancient times (but not only in such times) the full knowledge in a certain discipline, especially in sensitive disciplines, was not made known to the general public. It tended to be kept within specific groups, especially families, with father to son transmission being quite common. Therefore the elimination of the priestly class, even if not complete, by Manasses, led to irretrievable loss of information. The lost information was only partially and not very accurately restored in later times (particularly at the time of Esdra) by the survived priesthood, consisting mainly in priests from the lower levels, endowed with less information. It is interesting to notice that a similar event affected the transmission of the full information about the Egyptian religion,

because most of the priesthood was eliminated at the time of Artaxerxes Ochus (some 40 years before the conquest of Egypt by Alexander the Great), as is reported in Plutarch, *Isis and Osiris*

b – during the captivity in the Babylonian region the priests of the Judah tribe were exposed and most probably influenced by the local religions and traditions, including kabbalah, which has manifestly entered with its special numerology the chronology of the Jerusalem Bible (e.g. see the symmetrical distance from the Deluge of the birth of Adam and the birth of Abraham, and the virtually impossible fact that the ages of the patriarchs are given by a parameterized simple formula....)

c – the ten tribes of Israel were deported, circa 722 BC, by Sargon II (i.e. circa 140 years before the deportation of the Judah and Benjamin tribes to Babylon), to the *land of Halah, the river of Gozan, the city of Habor*. These places have been subject of many discussions, but it is clear to this author that *Halah* is the contracted version of *Havilah*, a land quoted in Genesis as related to Eden, that *Gozan* is a modified form of the name *Gihon*, one of the rivers of Eden, and that *Habor* corresponds to present *Kabul*, the most ancient city in the world in the local traditions. From the geography of Eden provided by this author in [10,11] it is clear that the ten tribes were deported to present Afghanistan, more precisely to the region around *Kabul*, once called *Kabulistan*. There they were less exposed to strong and highly structured foreign religions and hence they were more likely to preserve intact their version of the Torah. Moreover there are no indications that their priests were destroyed at any time. Hence the Septuaginta must be preferred, since on questions where there were conflicting versions very likely the version was approved that was preserved by the ten tribes, these being in majority during discussions.

BY THE ABOVE REASONS, we may conclude that the quoted traditions imply an interval of circa 2200-2300 years between "creation" (leaving here undefined what can be meant by "creation") and the Great Deluge, to be dated at circa 3171 BC by arguments to be given elsewhere. This year predates the beginning of the "historical" dynasties in Egypt and Mesopotamia; we also consider this date to be about 300 years later than the construction of the Giza complex, probably completed in the year 3440 BC, see Duranti [13] for a very special reason behind the year 3440 BC.

3. The lists of patriarchs and kings in Biblical and Mesopotamian sources

From the Bible we have a list of 10 patriarchs, in direct line from Adam. Another list of 10 kings, who do not appear to correspond to the patriarchs, is the list attributed to Berossus by Alexander Poliistor via Syncellus. That list is given here, with the length of the kingdom expressed in long saros according to the explicit statement in Poliistor. The names of the kings are a Hellenized form of a non Greek names.

ALOROS, 10
ALAPAROS, 3
AMELON, 12
AMEGALAROS, 18
DAONOS, 10
EUDERA, 18
AMENEMPSINOS, 10
OTHARTES, 8
XISOUTROS, 18

The total length is 120 saros, that at 3600 years each one would give 432.000 years. This is a geologically long number, spanning through several glaciations and catastrophe induced discontinuities on Earth. It is virtually impossible to believe that the list can refer to a continuous transmission of power by people with life duration up to 70.000 years. The numbers

are either mythical or symbolic, as it is usually believed, or they are wrongly interpreted. The idea proposed here came to our mind while reading an essay of Baccarini on the Seven Wise Men. We propose that either Berossus, or Alexander Poliister, used a wrong time unit. We suggest that the short saros should have been used instead of the long saros. Moreover we suggest that the original saros was somewhat longer than the present saros, at a value that we estimate was 20 or close to 20, for the following reasons:

a – the Berossus list with a saros of 20 would add up to 2240 years, virtually the same value in the Moses of Korene list

b – we would have a natural and powerful explication of the fact that the number 20 has been a fundamental unit of numbering in ancient times, surviving in several languages, e.g. Basque, Yoruba, Ainu, several languages of the Mundas in India and of tribes in New Guinea and Australia, see Agriesti [15], and partly even in present French language, via Celtic heritage.

ANCIENT PEOPLE were terrified by eclipses, a natural phenomenon that nowadays has virtually no negative effect on the biosphere. However consider the scenario proposed by Ackerman: Mars every 27 years was captured in a geostationary orbit over the Tibetan plateau, with the same hemisphere facing the Earth, an event lasting 14 years every time (the day of Brahma), followed by 13 years (the night of Brahma), when Mars was away from Earth. Under these conditions the hemisphere of Mars facing the Earth, due to the tidal forces generated by Earth, was subject to deformations, with immense volcanic eruptions and the pouring of a huge column of magma from the 5000 km long opening that is now the Valles Marineris. These events were accentuated, resulting in increased emission of boulders reaching the Earth and electromagnetic

discharges, when the Moon was passing behind Mars and especially when both Moon and Sun were both behind Mars. Thus we had a very special type of eclipse with dramatic effects and with a duration of not just a few minutes, as is the case now, but of about one hour, Mars angular diameter being over a dozen degrees at geostationary orbit. In such situations life became very dangerous over the surface of Earth, and man had to find a refuge in caves or in artificially built subterranean structures. Here may be the reason why cities were built even with different levels in the Anatolian plateau, in Central Italy, and in many other places in the world. Refuges to be used just for a short time during the dramatic eclipses of Sun and Moon by Mars.

The above described eclipses were still bound to take place at moments when the Moon was at one of the nodes, thus a modified saros was active also at that time, with the following changes:

- the duration was probably different than 18 years, since the presence of Mars must have affected the orbital parameters of the Moon and probably the distance Moon-Earth. We

conjecture it was close to 20 years, thereby explaining the special role of the interval 20 in ancient numeral systems. The computation of the orbital parameters defining a saros of 20 years is a mathematical problem that we expect to tackle in a following work

- due to the probably non resonant relation of the orbit of the Moon with the capture period of Mars the determination of when there would be the next dangerous eclipse (at integer multiple of 20) was a mathematical problem of significant complexity, that would explain the importance of astrological (actually, astronomical) calculations by ancient priests.

IT HAS BEEN argued by the great philologist Semeraro [14] that the word *Manu*, related to other word like latin *mens* (mind) or modern *man*, *mann*, means *he who computes*. Thus a very specific element of man would be the ability of computing a future important event, as a forthcoming eclipse, so devastating in the ancient scenario given by the work of Velikovsky and Ackerman.

Riassunto

In questo articolo osserviamo come la lista sumera dei re antediluviani si accordebbe con la lista biblica dei patriarchi nella durata totale sino al Diluvio se l' unita' di misura nella lista sumera, attribuita a Berosso via Alessandro Poliistore, non fosse l' unita' lunga di 3600 anni, ma una unita' breve di venti anni, simile al saros astronomico associato alle ripetizioni di eclissi lunari, e che giustificherebbe l' uso del venti come base di conteggio in molte lingue antiche e moderne.

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Acknowledgements

Work performed in the framework of a research supported by Fondi Accademici 2002.