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Research Article

The Star of Bethlehem and the Conjunction Between Saturn and the Pleiades

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Abstract

The Gospel of Matthew tells us that "After Jesus was born in Bethlehem in Judea, during the time of King Herod, Magi from the east came to Jerusalem and asked, 'Where is the one who has been born king of the Jews? We saw his star when it rose and have come to worship him'". It was in the modern age that several scholars, starting with Johannes Kepler, began to propose the hypothesis that what the Magi had seen was not a star, but an astronomical conjunction between planets. In this article we present the reasons supporting the hypothesis that the celestial phenomenon to which Matthew refers was in reality the astronomical conjunction between the planet Saturn and the Pleiades cluster which occurred in the spring of the year 3 BC. It has so far been ignored by scholars, although the Greek historian Plutarch dwelt at length on this type of conjunction (which occurs approximately every thirty years) because he considered it a very important event for an ancient Atlantic people. In favor of the plausibility of this hypothesis are not only certain correspondences between the Magi and the constellation of Orion, which is closely linked to the Pleiades, but also the fact that this conjunction took place at the time of the transition between the Age of Aries and the Age of Pisces – coinciding with the end of a very politically turbulent period, which had increased the expectation of a return to the mythical Golden Age, linked to the god Saturn – also taking into account the great importance attributed to the Pleiades by many cultures, very distant from each other.

Keywords: Magi; Three Kings; Star of Bethlehem; Pleiades; Maia; Saturn; Age of Pisces; Orion's Belt

Introduction

In this article we will try to demonstrate that the Star of Bethlehem – which, sighted by the Magi, guided them to the hut where Jesus was born – was not a conjunction between two planets, as various scholars currently believe, but between Saturn and the Pleiades, which occurred in the year 3 BC. To this end, we will use a methodology that consists of a new critical examination of sources that are not only classical, but also belonging to other literary and scientific contexts.

The Star of Bethlehem is the name given to an astronomical phenomenon that, according to the story in the Gospel of Matthew, occurred during the time of Jesus' birth: "After Jesus was born in Bethlehem in Judea, during the time of King Herod, Magi from the east came to Jerusalem and asked, 'Where is the one who has been born king of the Jews? We saw his star when it rose and have come to worship him'" [1].

In the first Christian icons, the celestial body of the Nativity scene was a star, the oldest example of which is a wall painting in the Catacombs of Priscilla (4th century AD) in Rome. In early medieval depictions, the celestial phenomenon could take other forms, such as a luminous circle, a rose window, a flower, an angel,

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a cherub or the Baby Jesus himself [2]. The representation in the shape of a comet appeared for the first time at the beginning of the 14th century, when the painter Giotto di Bondone, impressed by the passage of Halley's Comet in 1301, depicted the Star of Bethlehem as a comet with a long tail in a fresco in the Scrovegni Chapel in Padua. In the following centuries, this representation had an extraordinary artistic success, so much so that it has become a classic Christian icon of the Nativity of Jesus even today.

Another astronomical hypothesis, dating back to the modern age, is that the Star of Bethlehem was not a star, nor a comet, nor a supernova, but a conjunction of the planet Jupiter with other planets. Johannes Kepler was the first to state in his "De anno natali Christi" (1614) that a series of three conjunctions of the planets Jupiter and Saturn occurred in the year 7 BC [3]. This hypothesis was subsequently taken up and explored in depth by other scholars, including recently by the archaeologist and Assyriologist Simo Parpola [4]. Furthermore, various other conjunctions, very significant from an astrological point of view, took place in the years 3 and 2 BC. Three of them involved Jupiter with the star Regulus of the constellation Leo, also considered a royal symbol, while others, which occurred near Regulus, involved Venus and other planets, including Mars and Mercury [5].

But why would a planetary conjunction have guided the Magi to Bethlehem? It was evidently necessary for the event to be considered exceptional and to have a particular astrological significance, according to the ancient traditional idea that what happens on Earth is an effect of what happens in Heaven. As early as the 8th century AD, the Persian astrologer Masha'allah ibn Athari, using astrological data and theories of Iranian and Babylonian origin, argued that every important religious or political change, including the births of Christ and Muhammad, was linked to the conjunction between Jupiter and Saturn [6].

However, among all the hypotheses of astronomical conjunctions to be linked to an exceptional event, we do not find that the periodic meeting, mentioned with great emphasis by the Greek writer Plutarch (c. 40-120 AD), between Saturn and the constellation of Taurus has ever been taken into consideration. In fact, according to one of his works, in a remote era every thirty years, on an Atlantic island where the god Cronus was held prisoner, a great festival was celebrated, when in the nocturnal firmament the "Star of Cronus", that is, the planet Saturn, returned to the constellation of Taurus [7].

But now, before continuing, we must immediately ask ourselves whether it is reasonable to believe that in the distant past the Atlantic Ocean was navigable, as Plutarch claims in the passage [8] in which he reports this news. In fact, we have already tried to give a rational answer to this question in a previous article [9], the salient points of which we now report here. In it we first of all underlined that here Plutarch mentions a great continent that surrounds the Atlantic, which can be reached by following a route along which there are some intermediate islands. The first of these is Ogygia, the island of the goddess Calypso in the Odyssey, located "five days' sailing from Britain, towards the sunset"; then there are three others "as distant from each other as from it", before reaching the "great continent" that surrounds the "great sea" [10].

It is important that they are all islands located at a high latitude: in fact, there in summer travellers "see the sun disappear from sight for less than an hour each night during a period of thirty days, though with a brief darkness, while a twilight gleams in the west" [11]. Considering that in a previous work we identified Ogygia with one of the Faroe Islands [12] (which are located "towards the sunset" with respect to the northern tip of Scotland during the sailing season, that is, around the summer solstice, when the sun, given the high latitude, sets almost in the north), the other three islands of the North Atlantic along the route to the American continent are Iceland, Greenland and Newfoundland.

This accurate description that Plutarch makes of the islands that are located in the North Atlantic, between Europe and the American continent, is absolutely extraordinary. Not only that: Plutarch immediately afterwards states that on the coast of that overseas continent there is "a gulf no less extensive than the Maeotis (today's Sea of Azov, near the Crimea), the mouth of which is exactly in a straight line with the outlet of the Caspian Sea" [13]. According to Minas Tsikritsis [14], the reference is to the Gulf of St. Lawrence, on the Atlantic coast of Canada. In fact, the latitude of its outlet into the ocean, 47°, coincides with that of the "outlet of the Caspian Sea", that is, the delta of the Volga River. This says a lot about the geographical knowledge of the ancients and their ability to navigate across the oceans [15], and at the same time gives us further, decisive confirmation of the reliability of Plutarch and his story.

On the other hand, the possibility that there were ancient European settlements on the American side of the North Atlantic – perhaps also linked to the extraction of copper from the ancient mines of Isle Royale [16], the largest island in Lake Superior – emerges from various clues (which we have discussed in the article mentioned above), such as the persistence of myths and legends comparable to those of the Old World, as well as the Caucasian features of some Native Americans, which seem to confirm the idea of ancient contacts between the two opposite shores of the Atlantic. On the other hand, there are scholars who have linked the myth of Atlantis to megalithism [17], traces of which can be found almost all over the world, together with myths and legends that are often similar to each other in even very distant civilizations. This is in accordance with the results of an authoritative study on European megalithism, recently published: "We argue for the transfer of the megalithic concept over sea routes emanating from northwest France, and for advanced maritime technology and seafaring in the megalithic Age" [18].

This supposed prehistoric globalization through navigation, which preceded by millennia that achieved by European fleets starting from the 16th century, was made possible by the Holocene

Climatic Optimum (HCO), with average temperatures significantly higher than today's. In fact, until the third millennium BC, the HCO made the current Sahara Desert green and humid [19] and, at the same time, made the Arctic Ocean navigable during the summer [20]. This favored direct communications between the Atlantic and Pacific Oceans via a polar route, following easy coastal navigation along the northern Canadian coast, thus avoiding having to cross the very distant and very dangerous Strait of Magellan, located at the southern tip of the American continent.

But now, after having demonstrated the plausibility of Plutarch's claims regarding an ancient Atlantic civilization, the time has come to return to the question of the star of the Magi and to verify the plausibility of its identification with the astronomical conjunction indicated by Plutarch.

The conjunction between Saturn and the Pleiades

Let us return to the news given to us by Plutarch, that is, that in remote antiquity great importance was given to the periodic celestial encounter between Saturn and the constellation of Taurus. Why? As for Saturn, it is the planet that, among those visible to the naked eye from Earth (the others are Mercury, Venus, Mars and Jupiter), has its apparent cyclic motion with respect to the constellations slowest of all. In fact, it returns to the same position in the nocturnal firmament approximately every thirty years, after having crossed in this interval of time one after the other all the houses of the zodiac.

The importance attributed by many ancient cultures to the cycle of Saturn is attested by the fact that the Egyptian god "Ptah from the beginning bore the title of 'Lord of the Thirty-Year Cycle', that is, of the period of Saturn" and that "in China Saturn was the Imperial Star" [21]. This corresponds to the fact that, according to Pliny the Elder, in the Celtic world the Druids had "centuries ('saecula' in Latin) that last thirty years" [22], where these 'saecula' mean "time cycles" (in fact, the Latin word 'saeculum' is glottologically comparable to the Greek 'kyklos', 'cycle').

As for the constellation of Taurus, which is the other protagonist of this periodic heavenly appointment recounted by Plutarch, its importance is linked to the fact that it contains the Pleiades. They are a star cluster, about 440 light-years from Earth, which contains over 1,000 stars, but with the naked eye it is possible to see only from six to about a dozen, depending on the conditions of visibility and visual acuity of the watcher. They are mentioned in the legends of lots of peoples and are generally considered to be seven, the Seven Sisters of Greek and Roman mythology, among which, according to Cicero, the most important was the "Most Holy Maia" [23].

They have played a very important role in the calendars of many traditional cultures, particularly in ancient Mesopotamia, where "The Pleiades play an important part in the calendrical reckoning (…). The rise of the Pleiades is fixed in the second month of the Babylonian calendar Ayāru (April/May). It should be noted that the Sumerian name of the month recalls the name of the Taurus constellation (…). The Pleiades may stand as a pars pro toto of the Taurus constellation and thus appear in the Zodiac in substitution of the Taurus (…). The rising of the Pleiades at the beginning of the second month is mentioned in the MUL.APIN as well: "On the 1st of Ayāru the Pleiades become visible" [24].

In essence, the rising of the Pleiades in the Mesopotamian calendar correspond to the first day of the second month of the year, Ayāru, or April/May, which takes its name from the constellation of Taurus in the Sumerian language.

Returning to the centrality of the Pleiades in many cultures, it is also found in calendars such as, for example, those of the Basotho (southern Africa) [25], the Zulu [26], the pre-colonial Filipinos [27], the Aztecs [28], the Incas [29], the Hopi (Native Americans) [30], the tribes of Guyana [31], the Hawaiians [32]. All this confirms the importance of the Pleiades, which we will focus on in more detail later, in the calendars of the most diverse parts of the globe.

But before involving the Pleiades – and consequently their celestial encounter with Saturn – directly with the Star of Bethlehem, we must see if there are traces of their presence also in the biblical context and, if so, if a relationship can be found between them and what Matthew tells about the Magi and the birth of Jesus.

The Bible mentions the Pleiades three times, in Job 9:9, Job 38:31 and Amos 5:8, always together with Orion, the constellation located in front of the Pleiades. Another point of contact between the Jewish world and the Pleiades is the fact that Jerusalem is located on seven hills [33], which links it to Rome and many other ancient cities also located on seven hills, belonging to distant and very different cultures, such as Tehran, Byzantium, Armagh, Mecca, Besançon, Bamberg and many others (even Macau in China). In fact, Rome, as we will see better later, is a city closely linked to the Pleiades both for its Seven Hills - which represent its projection on the Earth according to the motto "as above, so below" traditionally attributed to Hermes Trismegistus - and for its foundation date, April 21, which according to the zodiacal calendar is the first day of Taurus, that is, the first day of the month of Ayāru, the Bull, in the ancient Mesopotamian calendar, corresponding to the rising of the Pleiades.

But now, before reaching the conclusions, a further piece must be added to this reasoning. We refer to the constellation of Orion, which in the night sky appears similar to a large hourglass, placed in front of Taurus and the Pleiades (Figure 1), with three almost aligned stars in the center, called Orion's Belt. We note that in many mythologies, including the Greek one, Orion is a gigantic hunter, whose stories are often connected to those of the Pleiades.

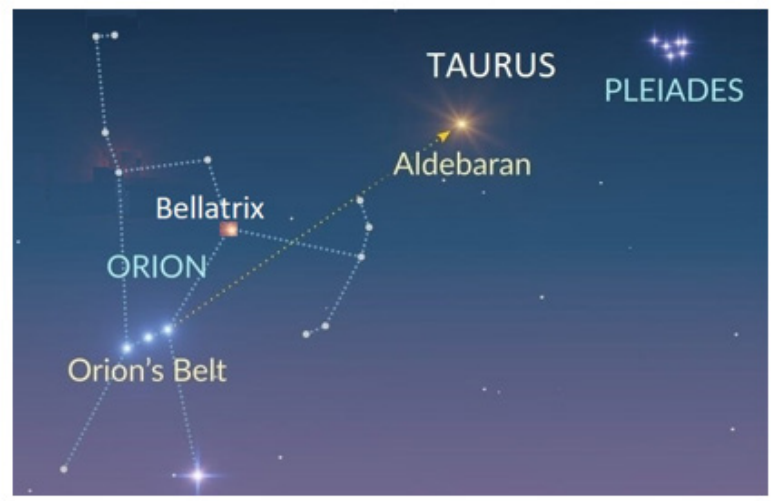

Figure 1: The constellation of Orion (left) with the three stars of the Belt in the center pointing towards the Pleiades (top right).

At this point we must verify whether there is a relationship between the Pleiades, Maia, Orion and the story of the Gospel of Matthew about the Magi and the appearance of the star.

One should first note that in Finnish mythology the name of Orion's Belt is 'Väinämöisen vyö', "the Belt of Väinämöinen". Väinämöinen is a wise man, who in the last rune of the Kalevala is directly involved in the story of the virgin Marjatta and her son: she found herself miraculously pregnant, gave birth in a stable and placed the newborn, who was destined to become the king of the Karelians, in a manger [34]. Here we find striking similarities with the story of the birth of Jesus reported in the Gospel of Luke, including the prophecy that "the Lord God will give him the throne of David" [35].

We also note that in the Kalevala, a 19th-century collection of epic poems compiled by Elias Lönnrot from the oral folklore and mythology of Karelia and Finland, Väinämöinen is the eldest of a triad of mythical characters (the other two being the blacksmith Ilmarinen and the young Lemminkäinen) who have the identical age characteristics that tradition attributes to the three Magi: one elderly, one middle-aged and one younger.

Not only that: in many popular traditions the three stars of Orion's Belt have the name of "Three Kings" or "Magi": for example in England [36], in Holland, among the Afrikaans in South Africa [37], in central-northern Italy [38] and in some former Spanish colonies such as Mexico [39] and Puerto Rico [40].

But what does all this mean? If we extend the imaginary line that connects the three almost aligned stars of Orion's Belt, we see that it points in the direction of the Pleiades. In short, these three stars, called "the Magi" in various traditions, with their alignment indicate the Pleiades, that is, the "Most Holy Maia" mentioned by Cicero. All this connects the Pleiades directly to the star of the Magi. Incidentally, at this point it seems at least curious that the star Maia at the center of the Pleiades is at the same time the goddess Maia who, according to Greek mythology, gave birth to Hermes, son of Zeus, at night in a cave [41].

From all that we have said it follows that the astronomical phenomenon observed by the Magi, to which the Gospel of Matthew refers, could correspond to the conjunction between Saturn and the Pleiades which occurred in the spring of 3 BC (Figure 2).

This date corresponds to the fact that for some scholars, such as Andrew Steinmann [42] and W.E. Filmer [43], the birth of Jesus occurred between 3 and 2 BC; furthermore Jack Finegan, who places the death of Herod in 1 BC, believes that if Jesus was born one or two years earlier, his birth would have occurred in 3 or 2 BC [44].

The End of an Era and the Beginning of the Age of Pisces

At this point we must ask ourselves whether the conjunction of Saturn and the Pleiades in 3 BC did not have a greater significance for the astronomers and people of that era than those that had occurred previously, such as to justify the expectations expressed by the Magi according to Matthew's story. Now, remembering on the one hand that in ancient times astronomers were also astrologers, and on the other that to correctly address problems such as the one we are dealing with "the rationalistic approach is sterile without the effort to immerse oneself in the mentality of the era and the people we are dealing with" [45], we must take into account the fact that at the time of the birth of Christ the transition between the age of Aries and the age of Pisces had already been underway for some time (just as now, after about 2,000 years, a transition from Pisces to Aquarius is gradually taking place). This is due to the phenomenon of the precession of the equinoxes, that is, a spinning top-like motion of the Earth's axis which over time tends to slowly move the constellations in the background of the celestial vault, taking almost 26,000 years to complete an entire cycle and return to their starting positions.

Figure 2: Reconstruction with the Perseus software of the night sky of April 1, 3 BC. On the left appears Orion with the three stars of the Belt in the center, almost aligned, pointing toward Saturn and the Pleiades cluster (bottom right).

Among the consequences of the precession, in addition to the fact that the North Star does not always remain the same but changes cyclically over time, there is also the fact that the zodiac sign in correspondence with which the sun rises at the spring equinox (currently that of Pisces, which at the time of Christ was taking over from Aries but which now, about two thousand years later, will soon be replaced by Aquarius) does not remain fixed, but instead tends to move in the celestial vault, albeit very slowly, and in this way after a couple of millennia or so it ends up giving way to the sign that precedes it in the sequence of zodiac signs. According to the beliefs of astrology, this periodic alternation of the constellations would have a strong impact on the events and destinies of men and peoples.

We note at this point that the Pleiades, measurers of the annual cycle as well as of the thirty-year cycle marked by its periodic encounter with Saturn, according to a passage in the Book of Enoch (an apocryphal text of the Bible) were also considered responsible for the precession of the equinoxes: "And there I saw seven stars of the heaven bound together in it, like great mountains and burning with fire. Then I said: 'For what sin are they bound, and on what account have they been cast in hither?' Then said Uriel, one of the holy angels, who was with me, and was chief over them, and said: 'Enoch, why dost thou ask, and why art thou eager for the truth? These are of the number of the stars of heaven, which have transgressed the commandment of the Lord, and are bound here till ten thousand years, the time entailed by their sins, are consummated" [46].

In this powerful image of the "seven stars of the heaven bound together in it, like great mountains and burning with fire", the seven Pleiades are immediately recognisable – as they are also found in the Bible: "Can you bind the chains of the Pleiades?" [47] – but at first glance its meaning seems to escape us (the idea of the seven Pleiades being compared to mountains is found in their relationship with the seven hills of Rome and Jerusalem, which we will discuss shortly, as well as in Greek mythology, where they were seven mountain-nymphs [48]). Incidentally, at this point it also gives food for thought that in the Finnish world – where we found the mythical triad Väinämöinen, Ilmarinen, Lemminkäinen who correspond to the three Magi, and Väinämöinen himself is connected to the story of Marjatta who gives birth to the future king of the Karelians in a stable – the word 'mäki' means 'hill'.

Now, remembering that in the Mesopotamian world the Pleiades are closely connected to the measurement of time, it is reasonable to suppose that their "transgression" refers precisely to the phenomenon of precession, which, gradually moving the celestial pole over time and consequently the position of the constellations in the firmament, had to be considered as a very serious violation of the immutable cosmic order established by God. This explains the exorbitant length of the penalty (ten thousand years), commensurate, as if by a sort of cosmic retaliation, with the very long duration of the precession. In fact, its complete cycle, as we have said, lasts almost 26,000 years, which, divided among the twelve constellations of the Zodiac, indicate that the sun rises at the spring equinox remaining in the same zodiacal sign for a period of about 2,150 years. This reinforces the idea of the importance that ancient astronomers attributed to the Pleiades as measurers of time, which is thus even extended to a scale, that of the precession, which is much larger than the annual one (due to the revolution of the Earth around the Sun) and the thirty-year one (linked, as we have seen a moment ago, to the apparent movement of Saturn with respect to the constellations of the Zodiac, but which in reality is due to its revolution motion around the Sun).

In reality, it is not possible to astronomically establish an exact date for the passage from one zodiac sign to another, given the

difficulty in establishing the precise boundaries of each house of the zodiac with respect to the adjacent ones; however, it is entirely reasonable to suppose that, in the periods of transition, to establish this date astronomers referred precisely to the conjunction between Saturn and the Pleiades, which instead is univocally definable and allows time to be precisely marked according to a thirty-year cycle, which is well suited because it is much longer than the annual one. Now, we have just seen that the conjunction closest to the birth of Jesus took place in the spring of the year 3 BC [49], when the time was more than ripe to consider the Age of Aries close to its conclusion and the expectation of the arrival of the Age of Pisces was growing more and more.

In this regard, a precise testimony, very indicative of the expectations connected to this epochal transition from Aries to Pisces, can be found in the literature of ancient Rome. We refer to the 4th Eclogue of Virgil, datable around the year 40 BC, in which the poet sings of the imminent return of the mythical kingdom of Saturn that will bring back the golden age to Earth and finally give peace, justice and prosperity to all mankind: "Now the last age of the Cumaean prophecy begins:/ the great roll-call of the centuries is born anew:/ now Virgin Justice returns, and Saturn's reign:/ now a new race descends from the heavens above" [50] (as for "the last age", it is, of course, the Age of Pisces, the last of the signs of the zodiac). Incidentally, perhaps it is also to this Eclogue (which in the past was also considered a prophecy of the birth of Christ) that we owe the fame of a wise magician that accompanied his figure even in the Middle Ages without ever completely dying out, to the point of having inspired in recent times the fairy tale "Virgilius the Sorcerer" by the Scottish writer and anthropologist Andrew Lang; but let us also think of the importance of this character in the Divine Comedy, who acts as Dante's guide on his journey through Hell and Purgatory (and even today in Naples, where his tomb is, Virgil is considered by the people almost a patron saint of the city).

Anyway, the entire world of that time yearned for a stabilization that would put an end to the continuous convulsions caused by the interminable civil wars that had long torn the Roman world apart and involved many other peoples. In particular, the last of these wars, that between Octavian and Mark Antony, saw the direct involvement of Egypt, which paid a very high price: this venerable, ancient and highly civilized kingdom, with a glorious history spanning several thousand years, around 30 BC, after the defeat of Cleopatra, collapsed miserably and found itself reduced to a province of Rome! It was the sign of an era that was over forever, and certainly this must have further increased the expectation for the arrival of the new Age of Pisces.

Furthermore, just three years after the end of Egypt, in 27 BC, Octavian, the victor, was named Imperator Augustus, and then, in 12 BC, he also became Pontifex Maximus; in this way he reunited in his person the two highest offices, the civil and the religious, of the Roman State, inaugurating a new phase of political stability that Virgil had foretold in the 4th Eclogue and then also in an important prophecy of the Aeneid: "Augustus Caesar, son of the Deified, who will make a Golden Age again in the fields where Saturn once reigned" [51].

At this point we are finally able to answer the question we asked ourselves earlier, whether the thirty-year conjunction between Saturn and the Pleiades that occurred in the year 3 BC could have had a greater importance for the astronomers/astrologers of that era than those that had preceded it. The answer is absolutely positive, because this conjunction – which occurred at the height of the transition between the Age of Aries and that of Pisces, in which a return to the mythical golden age was spasmodically awaited after the interminable political convulsions we mentioned earlier – was precisely the first of its kind to have taken place after the crucial moments marked by the end of the last civil war, the collapse of Egypt, the imperial and pontifical power assumed by Octavian Augustus and the inauguration of the Ara Pacis, dedicated to the Peace of Augustus, which we will focus on shortly.

Here it is worth emphasizing the fact that both Saturn and his Greek counterpart, Cronus, have a double aspect: that of the god lord of the Golden Age and that of the planet with the thirty-year cycle. In fact, in the passage from Plutarch from which this study began, the planet protagonist of the conjunction we are dealing with is called "the star of Cronus", the god who since ancient times has also been considered a god of time, also because of the notable similarity of his name, 'Kronos', with the Greek word 'khronos', 'time'. The temporal dimension linked to the thirty-year cycle of Cronus/Saturn – who is also the god of the Golden Age, both in Greek mythology (Cronus) and in Roman mythology (Saturn) – is perfectly consistent with this picture and therefore the encounter with the Pleiades and Maia (whose dimension as goddess of the Earth, or Mother Earth, in various cultures we will shortly verify) contains symbolic values that the astronomers/astrologers of the ancient world certainly had well in mind.

It is, therefore, not at all unreasonable to suppose that not only the Magi, but also the Roman priests within them – perhaps also urged by Augustus, who had been appointed Pontifex Maximus a few years earlier and was certainly interested in astronomical and astrological themes, which in antiquity were often the specific competence of the priestly class – gave prominence to this celestial conjunction and considered it as the beginning of the Age of Pisces (instead, current astrologers generally date this beginning to the year 1 [52], to which, however, no noteworthy astronomical phenomenon has been attributed). However, nothing leaked out outside the priestly circle, due to the taboo connected to the very close relationship between Rome and the Pleiades, which, as we will see shortly, had to be kept absolutely secret. In fact, a few years later the poet Ovid paid the price for it, who for having violated this secret was condemned by Augustus to perpetual exile in the year 8 AD, with the obligation to remain silent about the true reason for the condemnation [53].

The importance of the Pleiades in the ancient world

In ancient Mesopotamia "The Pleiades are among the few celestial bodies that receive a cult, and specific prayers are dedicated to them. From the sources it emerges that the Pleiades are mainly related to the movement of the Moon, and it is worth noting that the list of constellations of the ecliptic begins precisely with the Pleiades" [54]. This attests to their importance in the ancient world.

Their relationships with Rome also appear fundamental, which are attested both by the traditional date of the city's foundation, April 21 [55] – corresponding to the date of their annual rising, according to the Mesopotamian calendar, on the first day of the constellation of Ayāru (the Bull, which is the translation of the Latin word 'Taurus') – and by the fact that, according to the traditional concept "as above, so below", [56], the Seven Hills of Rome were considered the counterpart on Earth of the seven Pleiades [57] (Figure 3).

Figure 3: The Seven Hills of Rome, enclosed by the Servian Wall, and the seven Pleiades.

In particular, the Palatine, the central hill on which Romulus founded the city, is the terrestrial counterpart of the central star of the cluster, Maia – not by chance called "Most Holy Maia" by Cicero – who was the secret patron goddess of the city. Her name was hidden behind the generic name 'Bona Dea' ('The benevolent goddess').

This immediately explains the real reason – which in fact was kept secret – for the condemnation of the poet Ovid to perpetual exile: his crime was to mention in one of his works (the 'Fasti', written immediately before the condemnation) the close relationship between Maia, the Pleiades and the founding of Rome [58], which was absolutely forbidden to disclose for reasons of security of the Roman State, exposed by Pliny [59] (who had previously focused on the story of Valerius Soranus, condemned to death and executed in 82 BC for having publicly revealed the secret name of the city [60]).

Attesting that behind the title of "benevolent Goddess" was none other than Maia ("mother" in Greek) was Macrobius, a Roman writer from the 5th century AD, when the pagan world with its constraints of secrecy had by now set: "According to Cornelius Labeo, on the Kalends of May a temple was dedicated to Maia, that is, to the Earth, under the name of Bona Dea" [61]. In short, Maia, the central star of the Pleiades, was Mother Earth, who was reflected from the sky on the Palatine Hill and was the secret protector goddess of the city (and perhaps it is no coincidence that one of the two peaks of the Palatine was called by the Romans "Cermalus", a name comparable to Hermes, who according to Greek mythology was son of Maia and Zeus).

Confirming the identification of Maia with the tutelary goddess of Rome (and in all probability 'Maia' was also the secret name of the city) is the fact that this has finally allowed us to clarify the meaning, until now unknown, of the panel with the representation of "Saturnia Tellus" [62] (Figure 4) in the Ara Pacis Augustae in Rome (the latter is an altar dedicated to the goddess Peace, inaugurated by the Emperor Augustus in 9 BC).

The central figure is Maia, augustly veiled and holding the twins Romulus and Remus in her arms, while the two female figures on the sides, in a subordinate position, are two Greek goddesses: Leda (the mother of the Dioscuri twins, recognizable by the fact that next to her there is a swan: this is Zeus, who loved her by taking the form of a swan) and Leto (the mother of the twins Apollo and Artemis, depicted with the dragon that had persecuted her to prevent her from giving birth). Furthermore, in the lower part of the panel there is the image of a bull with its head raised, in front of a lamb with its head lowered: it is a clear allusion to April 21, the date of the foundation of Rome, in which the constellation of Taurus, of which the Pleiades are the most representative stars, takes the place of Aries, which in fact has lowered its head (it is no coincidence that the Arabic name for Aries is Hamal, 'lamb').

Figure 4: The Saturnia Tellus.

The meaning of "Saturnia Tellus" fits perfectly into the political/ideological context linked to the creation of the Ara Pacis. In fact, Rome, the terrestrial counterpart of Maia to whom the goddess/star granted her protection and probably her name (but all this had to remain absolutely secret outside a narrow priestly circle), represents the peak and the fulfillment of the history of the world, even surpassing the importance and greatness of Greek civilization, evoked by the parallel stories of Leda and Leto, although they too were mothers of divine twins, sons of Zeus. Therefore, the composition as a whole represents a tribute to Maia, the protective goddess of Rome, as well as to the emperor Augustus, the architect of the peace, power and prosperity of Rome and its empire. This corresponds well to the idea that the year 3 BC, the anniversary of the thirty-year conjunction between Saturn, the ancient Lord of the Golden Age, and the seven Pleiades, which were the celestial counterpart of Rome, could be considered as the beginning of the new Age of Pisces.

Another clue, albeit indirect, to the importance of this date in our opinion could be found in the traditional date of the foundation of Rome: 753 BC, established by Marcus Terentius Varro, who was a great scholar of ancient Rome and in the last part of his life gained the favor of Octavian, who in the meantime had become the master of Rome. Now, since the first centuries of the history of Rome are shrouded in legend, it is difficult to understand what criteria were used by Varro to establish this date, however, considering the close ties of Rome with the Pleiades, it is not unreasonable to suppose that Varro – who, being very learned, was certainly acquainted with the importance of the conjunction of the Pleiades with Saturn – thought that not only the day of its founding, April 21, but also the year should be linked to the Pleiades. It is likely, therefore, that he thought of a date that was prior to the conjunctions of his time by a multiple of 30 years, thus arriving at the year 753 BC. But he certainly could never disclose the real astronomical explanation of this calculation in public, since at its basis was the taboo question of the unmentionable relationship between Rome and the Pleiades: just think of the fact that, when Varro was young (he was 34 years old), Valerius Soranus was condemned to death for having transgressed the rule of silence on this subject. However, in reality in 753 BC there was no conjunction of Saturn with the Pleiades, since its revolution around the sun does not last exactly 30 years but about 29.5, which in a span of seven centuries involves a shift of several years. In any case, this question deserves further investigation.

Among the ancient cities on seven hills, in addition to Rome, Armagh and Mecca also offer food for thought. As for Armagh, the religious capital of Ireland in pre-Christian times, it was an important royal site in Gaelic Ireland since very remote times, with a large ceremonial monument called Emain Mhacha [63], which takes its name from Macha, the great goddess of the Ulaidh, the people who gave their name to the province of Ulster. In fact, "Ard Mhacha" means "hill of Macha" (later anglicized to Ardmagh and then became the current name) and corresponds to one of the seven hills of Armagh. Incidentally, here we might ask ourselves if it does not correspond to Armageddon, the name of an unknown place, mentioned in the Apocalypse of John [64], where a mythical battle took place; in fact dūn (Irish dún 'fortress') meant something like 'fort' or 'walled town' on a hill [65].

Regarding Mecca, the holy city of Islam, also characterized by 'Seven Historical Islamic Mountains' [66], the official Saudi English spelling is 'Makkah' [67], and the term 'Al-Mukarramah' translates to 'the Honored' or 'the Noble', signifying its revered status [68], which seems to recall the 'Most Holy Maia' mentioned by Cicero.

It is also striking that in the Slavic world the goddess of the Earth is called Mokosh or Makosh [69], that in Mycenaean Greek Ma-ka (transliterated as Ma-ga) is "Mother Earth" [70] and that

Maka is the goddess of the Earth among the Lakota Sioux [71] of the American Plains. But why be surprised? The Pleiades are called Makali'i [72] in Hawaii and Maya-Mayi among the Australian aborigines of New South Wales; the latter are seven sisters, two of whom are kidnapped by a warrior, Warrumma, or Warunna (this name seems to be similar to that of Orion). They eventually escape by climbing a pine tree that continually grows up into the sky where they join their other sisters [73].

Returning to the Lakota Sioux (who sometimes have more Caucasian than Asian facial features), in addition to calling the goddess of the Earth 'Maka', they call the sky 'Skan', almost identical to the root of 'sky' [74]. But it is also striking that Skan and Maka were created by 'Wakan Tanka' [75], the Great Spirit (who gives life to the Universe and all creatures), whose name in turn finds an astonishing correspondence both in sound and meaning in the name of 'Waaqa' [76], which means God in the language of the Oromo people of Ethiopia, almost at the eastern end of Africa!

At this point, it is plausible that even the assonance between the name of the Magi [77], astronomers and astrologers, and those of Maka-Makkah-Macha-Makali'i-Maia-Maya-Mayi – which we have seen associated with the Pleiades in many different cultures, distant both in space and time, but all united by attributing great importance to those seven stars – is not due to chance. In fact, one could suppose that one of the primary tasks of the most ancient astronomers was to observe and study them, to the point that they themselves could have taken the name of the main star of the cluster. This obviously makes the hypothesis proposed in this article even more plausible; in short, the association of the Magi with the three stars of Orion's Belt could belong to an ancient mythical heritage, common to many peoples, which could have been aimed at preserving the memory of the position of the star Maia (of whose great importance for our distant ancestors we have many testimonies) starting from the three stars of Orion's Belt, easily identifiable in the winter night sky (which are not by chance called "The Three Kings" or "The Three Wise Men" in different cultures) [78].

In this same light, one can also read the fact that for the Chukchi of Siberia, Orion (who is also a hunter in their myths) shoots an arrow represented by the star Aldebaran [79] ('Alpha Tauri'). The latter, in fact, which is a very bright star, is located almost exactly halfway on the "line of sight" between Bellatrix – the star of Orion's 'hourglass' that in the night sky appears closest to the Pleiades – and the Pleiades themselves (Figure 1). In short, Aldebaran can be considered as a real "indicator arrow" that, starting from Orion, immediately allows us to identify the Pleiades in the night sky.

Figure 5: The lead rider of the Sartiglia of Oristano (Sardinia) blesses the crowd.

A not very different story is found among the Polynesians of Manuae (Cook Islands), according to which the Pleiades were initially a star, the brightest in the sky, but a god to punish it asked for the help of Sirius, who threw Aldebaran at it, shattering it into six pieces and generating the Pleiades [80]. An echo of this type of legend, presumably very ancient, in our opinion can perhaps be found in a very different part of the world: we are referring to the 'Sartiglia', a traditional festival in the city of Oristano in Sardinia, which is celebrated every year during Carnival. The Sartiglia is one of the oldest equestrian carousels that still take place within the Mediterranean area, during which men on horseback, with their faces covered by a white mask, must manage to pierce with a sword a star hanging high at the finish line of an equestrian race that takes place along the central streets of the city [81]. Furthermore, there

are good reasons to think that their leader, 'su componidori', that is the lead rider who leads the race, represents the image of a divinity (or perhaps, we believe, a star in the sky). In fact, he cannot touch the ground at all during the entire ceremony, in which he even plays a sacred role, that of blessing the crowd with a particular bunch of flowers (Figure 5) called "sa Pippia 'e Maju", "the little girl of May" (a name that could recall Maia, while the appearance of the bunch of flowers could perhaps recall the Pleiades star cluster).

But could it be that even the Spanish bullfight (which seems to resemble more a sacrificial rite than a real fight) had its origins in the same type of myth? In fact, the Pleiades were considered the shoulder of the Bull [82], that is, the target that the matador must hit with his sword, like the Bull of Heaven killed by Gilgamesh in a Sumerian poem [83], or the bull sacrificed to Poseidon Heliconius in the Iliad [84], not to mention the bull killed by the kings of the island of Atlantis during a solemn ceremony that Plato describes in detail [85] (after all, the name of Atlantis originates from Atlas, the mythical first king of the island, who according to Greek mythology was the father of seven daughters, who later "ascended to heaven with the name of Pleiades" [86]). And perhaps we would be tempted to add to this casuistry the seventh labor of Heracles – the one in which he fights against the Cretan bull – keeping in mind that in a passage of the Odyssey there is a singular image of Heracles "like dark night", with an extraordinary belt holding a sword [87] on which Homer lingers for a long time. However, this strange Homeric character actually seems more similar to Orion than to Heracles, considering that under the Belt there is a group of stars forming a vertical line, called "the Sword of Orion".

In short, the myth of the seven Pleiades is widespread everywhere, from the Lakota Sioux to the Australian Aborigines, from New Zealand to the islands of Polynesia, and it is very curious that it seems to present similar characteristics everywhere: they are always seven – even in a legend of the Wurundjeri people of south-eastern Australia, according to which they are the fire of seven sisters, who carried burning coals at the end of their digging sticks, but then became the bright stars of the Pleiades cluster [88] – although in reality you can count up to twelve of them with the naked eye. This singular globalization of both their name and the myths connected to them seems to refer to a global prehistoric civilization based on navigation – of which Plato left us the memory in the myth of the island Atlantis – whose historicity we have tried to demonstrate in a previous work [89]. It fits well into this picture that the context in which Plutarch places his story of the conjunction between Saturn and the Pleiades is an ancient Atlantic world, the same one in which Plato sets the myth of Atlantis.

Another aspect, perhaps even more surprising, of stories in which the Pleiades are protagonists is that sometimes there is talk of direct contacts between them (or of a "land in the sky" connected to them) and human beings. We find this theme for example among the Mono of the Sierra Nevada, who tell of six wives who loved onions more than their husbands and now live happily in the "land in the sky" [90], or in a tradition from Borneo, which speaks of a tree that allows a man to climb up to the sky and bring back useful seeds from the "land of the Pleiades" [91].

No less singular is the idea, found among some American populations such as the Guatemalan cultures of Monte Alto, Ujuxte and Takalik Abaj [92], that their mythical ancestors descended from the Pleiades; similarly, in a tale of the Wyandot, Native Americans from the Great Lakes region, seven "singing maidens", daughters of the Sun and the Moon, who lived in the Land of the Sky, came down to Earth and danced with human children [93]. Furthermore, a myth of the Ojibwe (a group of Native Americans who speak the Algonquin language) tells that they came from the Pleiades through a passage between Earth and the 'world of the stars' called 'Bagone-giizhig' [94]. But let us also think of the Dogon of Mali, in West Africa, according to whom their ancestors had arrived on Earth in a sort of flying ark, inside which the Pleiades were depicted in the area reserved for them [95]. And what about the Banrawat, a semi-nomadic Himalayan ethnic group, who call the Pleiades 'the seven sisters-in-law' and when they see them appear above their mountains every year they say they are happy to see their ancient relatives again [96]? These curious stories bring to mind the assertions of those who maintain that, among the various species of humanoid-looking alien beings that would visit Earth, there would be one, with physical features similar to those of humans, that would come from the Pleiades [97].

Perhaps there is a trace of this nostalgia for a lost paradise located in the sky – that is, a mythical celestial Mother Earth that, according to various mythologies, was located in the seven Pleiades – in a phrase contained in a well-known Christian prayer by a German monk who lived in the 11th century, Hermann of Reichenau, who was also an astronomer and historian: "To thee do we cry, poor banished children of Eve; to thee do we send up our sighs, mourning and weeping in this valley of tears" [98]. This could depend on the perception, that human beings sometimes have, of not feeling well adapted to life on Earth, as the third chapter of Genesis seems to highlight when it tells that the traumatic expulsion of our ancestors from a primeval earthly paradise involved the pain associated with childbirth, the effort of obtaining food and the need to dress and cover themselves with skins.

Let us also note that this singular idea that among the stars there could be a beautiful primordial Earth – that is, a lost paradise where the human race would have originated, of which this planet, where our ancestors would have been relegated to a remote past and where a miserable and difficult life is led, would be only a pale reflection – could perhaps be at the origin of an extraordinary passage in which Plato hints at the existence of a wonderful land in the sky, inhabited by men and animals, which is incomparably more beautiful than our present world: "To begin with, the Earth when seen from above is said to look like those balls that are covered with twelve pieces of leather; it is divided into patches of various colors, of which the colors which we see here may be regarded as samples,

such as painters use. But there the whole Earth is of such colors, and they are much brighter and purer than ours; for one part is purple of wonderful beauty, and one is golden, and one is white, whiter than chalk or snow, and the earth is made up of the other colors likewise, and they are more in number and more beautiful than those which we see here (…) And there are many animals upon it, and men also (…) And they have sacred groves and temples of the gods, in which the gods really dwell, and they have intercourse with the gods by speech and prophecies and visions" [99].

We believe that in the future it will be appropriate to delve deeper into these issues to understand the real origin of these stories, so singular and widespread in the myths of peoples very distant from each other. In the meantime, all hypotheses are left to the reader.

Conclusion

In this article we have verified that there is no lack of reasons to suppose that the star of the Magi mentioned in the Gospel of Matthew was the conjunction between Saturn and the Pleiades that occurred in the spring of the year 3 BC. In fact, we must consider on the one hand the importance that according to Plutarch an ancient Atlantic people attributed to this conjunction, on the other the fact that the three stars of Orion's Belt, those that indicate the Pleiades, in various parts of the world were or still are called "The Three Kings" or "The Three Wise Men".

If we add to this the expectation that there was at that time for the arrival of the Age of Pisces, with the connected hope of the return of the mythical Golden Age, in a critical phase of human history that among other things had recently seen the collapse of the Kingdom of Egypt (the longest, oldest and most venerable institution ever seen in the history of mankind), we can understand what that date could have meant for those who dealt with these issues.

In fact, if we put ourselves in the shoes of an ancient astronomer/astrologer, the conjunction between Saturn and the Pleiades actually represents the meeting of two mythical entities of primary importance: on the one hand, the planet that bore the name of Saturn, the Lord of the lost Golden Age, whose return was anxiously awaited with the arrival of the Age of Pisces (it is a sentiment expressed with great force, and at the same time with profound humanity and delicacy, by Virgil in his 4th Eclogue); on the other, the Pleiades, or the "Most Holy" Maia, Mother Earth, the protective goddess par excellence (in fact, it is no coincidence that we have dwelt at length on her figure in the last part of this study). In short, it was a "summit meeting" in Heaven between two divine beings, one male and one female, which, given the circumstances, at that particular moment took on an exceptional symbolic value. From it one could expect, as a counterpart on Earth – "As above, so below" – the birth of a Special Child, the future King that the Magi were looking for "to worship him".

This is, in our opinion, the essence of the discourse that has remained hidden for so long behind the words of the Gospel of Matthew, but which still has its roots deep in the unconscious of many human beings (which also explains why, after two thousand years, the motif of Christmas and the Star of Bethlehem continues to exert a great fascination).

In any case, the great distance that separates the cultures involved in this study attests to the antiquity of these conceptions, supporting the idea that there was a global prehistoric civilization spread across the planet, of which Plato left us the last memory by passing down to us the myth of Atlantis, of which what has emerged here represents further confirmation. This implies that in prehistory there was a civilization with considerable knowledge of the art of navigation (which in turn presupposes an in-depth knowledge of the stars and their cyclical motions in the celestial vault, which is essential to determine the position of the ship and to calculate the route), as confirmed by recent studies on megalithism.

Finally, we believe it is useful and necessary to further investigate the issues touched upon in this study, which certainly requires further investigation by specialists to support the hypothesis proposed here. I would also consider it very appropriate to work on all the themes related to the importance that many cultures of the past have attributed to the Pleiades and in particular to Maia, Mother Earth. In fact, future studies and insights into these topics and others that may emerge in the meantime could shed new light on the prehistory of mankind and, perhaps, indicate new, unexpected perspectives for the future.

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