



“The history of astronomy,” says Dutch professor, Anton Pannekoek [A HISTORY OF ASTRONOMY, George Allen & Unwin Ltd, London, 1961 (*Dutch original: De Groei van ons Wereldbeeld*, Wereld-Bibliotheek, Amsterdam, 1951)]:

. . . is the growth of man’s concept of his world. He always instinctively felt that the heavens above were the source and essence of his life in a deeper sense than the earth beneath [*unwarranted assumption?*]. Light and warmth came from heaven. There the sun and the other celestial luminaries described their orbits; there dwelt the gods who ruled over his destiny and wrote their messages in the stars.

The divine stars, the sun and moon were gods, according to earliest Astronomy and her ugly step-sister, Astrology. (*Moderns see her as ugly, but once it was the other way around: Astronomy as the intruder.*) “If it can be argued that the inspiration upon which religion is based was derived from the very sight of the sky,” says Nick Campion,

. . . then astronomy and religion share common origins, a hypothesis for which the surviving evidence is found in sacred calendars. The observation of the sun, moon and stars is also universal and, if religion has an astronomical component, even if only as respect for the alternation of light and dark through the movements of the sun and moon, then astronomy – and astrology - as a religious phenomenon, must have emerged in parallel with human consciousness. To emphasize the point, Ernst Cassirer noted how, amongst all peoples and in all religions, creation begins with light, together with the perception of space that allows people to orient themselves to the heavens.

[‘Challenging Boundaries,’ speech by Nick Campion, Kepler College, 2006]

The overarching ‘body’ of the sky god; the daily ‘birth and death’ of sun, moon, & stars: a fabulous magic show, so obviously organized that it just had to be conducted by the gods, continually, which took precise teamwork. But, like their human wards, the gods were not of one mind. Now and then one or another would grow bored in some relatively minor role, or envious of those in superior positions, or even fall in love with another god’s consort, and they would clash, temporarily deflecting the universal purpose (if there was one); perhaps creating a mighty storm out of season, or an earthquake, or a devastating flood or drought, or plagues of insects or disease. There were even tales told of tampering with the sun god, stealing his vehicle and stopping it in the sky at mid-day or losing control and plummeting too close to the earth. These undependable deities had to be entertained and appeased—and, of course, worshipped. They too had their needs and desires. Even if immortal, they had various weaknesses and imperfections. They were susceptible to envy and insult and anger as well as joy or sorrow, love or hatred, mercy or vengeance. Just like human chiefs or judges, they could be flattered and cajoled and manipulated, sometimes by mere prayers and obeisance, sometimes by the most gruesome sacrifices. If only one knew what they wanted. Thus, from time immemorial, the magi found employment, security, respect, and often considerable wealth.

By watching the heavens and keeping score they determined the major patterns in the otherwise unaccountable interactions of the gods. Cycles were revealed—predictable behavior, if one knew their laws. The heavenly divinities, it was noticed, were joined in constellations. The changing lengths of days and nights were involved in their turning. The near precision of recurrence in these celestial movements made timekeeping possible. Charts and calendars to determine the solstices and the equinox were devised, some of them laid-out on the ground by using stones and towers—obelisks, leading to more complex structures: solar and star oriented temples. (Incidentally, most of the churches in England, the old ones, at least, are positioned so their easterly windows face directly to the sunrise on the dawn of the special day of their patron saint. So they are, in that sense, also solar temples).

The orientation of the ancient temples, it might seem at first encounter with their original accuracy, would have required surprising sophistication in astronomical acumen. Not so. Aligning a solar temple (sufficiently accurate for several centuries) is actually a fairly simple accomplishment, given previously recorded information related to immovable landmarks and accurate dating. All the necessary data can be discovered by merely counting the days between recurring positions of the Sun during a year or two.

[Discuss finding due north, assuming flat topography, without a compass (& finding east-west by 'rope-stretching' to establish a right angle). How, then, to find the angle of alignment to sunrise on the solstice and/or equinox (or any feast-day in between), and thus how to determine the length of a year in days without mathematics beyond the simple counting of days from solstice to solstice and back again.]

Aligning a temple to the rising of a star is even easier and much more lasting, since the stars, relative to one another and being so much farther away than the sun, seem static—even though the whole field does move overhead in a yearly pattern that must be adjusted depending on the latitude of the observer. Due to the fact that the sun also moves and the Earth is imperfect in its motion (precession, etc.) the stellar is more accurate than the solar orientation. Even after many years of additive distortion and inaccuracy in the solar calendar, the star-monuments would still satisfactorily govern the seasons for such as the planting of crops. (But not forever. Since the whole solar system moves with the sun around the galactic core, changes occur even with the 'fixed' stars—noticeable, however, only over several centuries rather than a few years).

These ancients, of course, had no knowledge of the true movements of the discernable cosmic objects; nor did they suspect the movement of Earth itself. For them the sun was alive—a god, who crossed the heavens in a boat or a chariot—as was the moon, usually the feminine version. The stars were also divinities, whose place had been determined by past supernatural events or forced by a strongman-type god (Marduk, for instance, in Babylonian lore). The very sky, which we tend to think of as relatively empty, was a mega-god to whose body the star gods were attached, except for the wandering ones (the planets). Thus the priests of Egypt, who knew these relatively simple but esoteric surveyor tricks, could ensconce themselves in glory and enjoy considerable political power through the mysteries of astronomy and by governing agriculture—which was by far the most important item in the continuing existence of probably the most static and peaceful of history's high civilizations.

That is not to imply that the priests were con-men: non-believers who used the power of faith to dominate the faithful. Or could it be that faith is actually a weakness: a susceptibility to mental manipulation? It depends on how you look at it:

Individualist view: Faith may be seen as weakness of the many: those who tend to leave the search for truth up to others, thus depriving most individuals of their potential for self-development and worldly knowledge and understanding. From that perspective, faith could be understood as a negative for the society, generally, presuming (as individualists seem to do) that strong individuals make for a strong society, and that a care-taking, *socialist society weakens and spoils its members in the spirit of equality.*

Socialist view: Most individuals are weak. Faith, then, is a kind of social cement making society possible—great faith, therefore, makes a great society (as measured by how much it overcomes the individual impotency of the majority), whereas, by definition, *individualism destroys society in the spirit of liberty.*

Have you not heard liberty and equality compared as negatives? That is because they have been viewed by moderns as not only the antidote to the division by classes and the shackles of oppression but are understood as mutually supportive. Yet it is the combat between these two ideas that is one of the great motivating factors in the movement of history. In the modern world, however, since both liberty and equality are highly valued, each side in the individualist v. socialist confrontation has attempted to incorporate something of the strength of the argument of the opposition. Let's step away from our topic briefly to delve deeper into this comparison—a theme that will recur:

The individualists stand for freedom first, but they do admit 'equality under the law'. The equality part is due mainly Christianity's influence, stemming from Jesus' concerns over the brotherhood of man, later fortified by bio-science via human genetic similarities. That much egalitarianism found its way into America's founding documents. But the idea of equality as 'sameness' is seen unfavorably by promoters of individual excellence and wealth gained through personal ambition for dominance—or just for security. By keeping government limited and out of the business of care-taking, they favor a system that would tend toward everyone being to some degree productive, even if part of the motivation is fear of failure. They favor performance without a net so as to toughen souls as well as bodies, relying on charity and strong family bonds to preserve the infirm, the insane, and the unmotivated. That has not worked terribly well for the poor. Aristocracies have, from time to time, become somewhat remote, obscenely arrogant, non-caring, and oppressive (e.g., 'Let them eat cake.' [Marie Antoinette]).

On the other hand, free (*laissez faire* oriented) societies have found ways to advance markedly (e.g., the industrial revolution), mostly via advances in science and technology due to the contributions of strong and some admittedly greedy individuals. Of course, in a free society where dynamism is the rule there will be struggles for power and the mighty will be free to attempt to control and oppress the weak. Though the continual power struggle might generally prevent extended periods of totalitarianism, socialists point to the overall gross unfairness (a quite unnatural concept). They also think that such struggles are wasteful and will tend to exhaust the soldiers enlisted in it. While that may be debatable, and even if there are opportunities for men of merit to rise in conditions of freedom, socialists believe the good of the whole society is too easily supplanted by the good of a few contenders, and the majority (generally apolitical and not especially meritorious), will hardly be able to distinguish such a system from tyranny—and for long periods, there *will* be tyranny. That was a major problem for the USA founding fathers, and exactly what the U.S. Constitution was so carefully designed to prevent by institutionalizing an oxymoron: 'limited government'; accomplished by dividing it into separate departments whose interactions are called 'checks and balances'.

The socialists, due to the advance and success of societies allowing personal liberty over the course of the last few centuries, are stuck with arguments for democracy, which implies some degree of liberty and, so, does not really fit neatly with socialism because the need for control is complicated by the necessary pandering to the ignorant masses to achieve and keep power. That is why many of socialist leaning, even in America, were much in favor of fascism, loving Mussolini at the advent of his power in Italy, supporting even the communism of Stalin and Mao, and still stand with Fidel Castro, seeming not to have noticed the horrors that attach themselves to Marxism. When fascism and communism proved tyrannical and oppressive, embarrassing some socialists, particularly Marxists, they quickly recovered confidence, seeing that socialism might be able to subvert democracy by *seeming* to support it. There were some slips of the tongue, e.g., Senator Edward Kennedy who, admitting that socialism has never worked in the past, said that was because "...they didn't have us [referring to the Democratic Party, particularly himself and like-minded Democrats] running it."

Because the many, without education, are ignorant (and it is in the interest of any form of government to keep them that way, as control is the definition of government); they can be bamboozled: manipulated with promises and warnings. But this is only because they have the 'power' of the ballot—otherwise they would be manipulated by force to do what the leaders determine is good for them. And best of all, they can be encouraged in a limited sort of liberty—a kind they will like, such as licentiousness. They will even vote for those who relieve them of the need to achieve their potential as individuals; those who promise to make their lives easier and free of care and with more time for pleasure—and all of this for only the simple act of voting for it. This is exactly what Tocqueville warned about in his 1830s book, *DEMOCRACY IN AMERICA* (still the best and deepest book on this subject), when he feared the U.S. would run into economic difficulty and the republic might founder when the majority discovered it could vote itself the largesse. When that does not work out well, elected officials blame other elected officials and urge their own re-election so they can continue 'fighting' for equality against those 'right wingers' who would force self-improvement upon the people via legislation allowing competition between them. Winners and losers are anathema to equality.

As part of the big socialist experiments, religion was either curtailed or commandeered. I.e., atheism is promoted but faith is still necessary and that need is utilized. Faith is diverted; switched to the new political philosophy. But unlike faith in the afterlife, there are expectations of actual life-style improvements and, ultimately, success in the here-and-now through communism. When that does not occur—and when it did occur to the citizens of the USSR that they had been effectively enslaved, and when they compared their situation with Western-style democratic oriented societies—faith in socialism was found hollow. While religion in the West may seem to be in decline nowadays (and most notably among the socialist intelligentsia), modern thought has founded a new faith—the faith in science. The new faith is just as mysterious to the unenlightened as are the old religions, and it can be just as promising and just as frightening. And with the new faith comes freedom from morality, since science (supposedly restricted to facts) passes no judgment. The people, then, can be encouraged as libertines, even while they are checked economically and politically. Ultimately, despite the latest fad among its supporters: calling themselves 'progressives' and claiming they are in favor of 'diversity', socialism needs conformity—not creativity—and thus is stultifying, tending toward mindlessness, the kind encouraged by TV and video games and text messaging as opposed to books, playground participation, and actual reading and writing. Education, under the sway of egalitarianism, thus becomes only a code word for indoctrination. The mind must be channeled into sameness, not opened to difference. Religion, while not encouraged, is tolerated as long as it promotes

orderly behavior among those incapable of understanding that morality is a duty to humanity rather than to God, and consists, generally, of keeping ones place in line. By such training, it is hoped, worldwide socialism will end warfare. If everyone would just accept their position in life, acquiesce (Is that really the key to world peace?), aggression will be thereby extinguished.

The idea of the family is also, inconspicuously as possible, discouraged, as it tends to be a source of individuality. It presents a history of individuals, not only of parents but a not necessarily nationalist ancestry to whom individual allegiance is owed: a debt that is expected to be paid through continued achievement by the descendents (definitely anti-egalitarian). In that regard, a strong family represents another sort of society contending for loyalty. Thus it is a stumbling block in the socialist/egalitarian path. But what of those who still retain some remnants of a natural mind? Will they not compete despite all attempts to train and to legislate competition out of existence? Or will they just be drugged (or lodged in psychiatric institutions)—and by whom? Answer: By those in power. When the only elite are government officials the route to success is political submission. The young will join ‘the party’ (or the military or the police) and support those in power: the winners. That is a tough and merciless game. Do not expect them to be sensitive to the sorrows of the many, the sheep who will be herded to the polls to vote for the tyranny-in-progress or to be sacrificed by loss of their ration cards.

For both individualists and socialists, the office-seekers and/or would be leaders—the elite: aristocrat/meritocrat or socialist/egalitarian—it is personal power and wealth that is of utmost importance, not the health and welfare of society. The leaders, while they are in power, are almost always aristocratic in attitude and despotic as needed to stay in power. For them, social *stability* is what is sought, even if it has to be gained by lies, stealth, or outright ruthlessness. Freedom is found in idealistic documents and speeches. It is anathema to actual government.

In the ancient world, the idea of social and political equality had not been discovered. In governing: in keeping political stability, the belief system encouraged by the magi worked well for the most part. The priests came to ‘know’ something about the character of the various gods and their movement about the sky (though they knew nothing about stars and planets), and based on that ‘understanding’ they could determine events—the big ones, at least, like when the river would rise, when the solstices would occur, and they learned even to predict lunar eclipses. Much of what they did not know, they pretended to know. What they did not understand (which was plenty) they left in the hands of the gods, to whom they earnestly prayed for favorable consideration and conditions—and for the fulfillment of their prophecies. Only very loosely can this be termed astronomy. Still the training was rigorous and the esoteric ‘knowledge’ one needed to master was considerable—and top secret. In return, they got great respect and a relatively comfortable life, with the more elevated priests living not unlike kings. Not surprisingly, they took great care to support their benefactor, the real king, so as to maintain their enviable position and to keep their influence over him; and, in some cultures, they even accorded him godhood (or made no objection to his self-deification) in order to advance and further secure his power and thus their own.

Over thousands of years, Egypt changed hardly at all. From its rise (we can only speculate as to how) to its final decline and assimilation into the Hellenic world—except for the division into two kingdoms and reunification; some expansion and contraction of territory and wealth, changing from age to age with their leaders’ quality of

statesmanship, or lack thereof; and some spats between rulers (not to mention the relatively brief Hyksos interdiction), all of which kept their world from complete stagnation—essentially, Egypt endured. The simple mathematics and elementary geometry of her scholars were perfectly sufficient to their needs. As Egyptians were a practical people, rather than theoretical [thus one of E.T. Bell's titles, *The Age of Empiricism*—which to us means a sort of philosophy but, for them, it was just their non-inquiring way of life], and since their knowledge of the universe was bound up so tightly with their religion, their science did not noticeably advance. In fact, along with art, science had a rather ill-defined existence. Both tended to prosper or starve as the power of religion weakened or increased relative to 'politics' or the state.

Egypt's great reputation for architecture, too, is enhanced by the size and duration of the monuments. The ornamentation is elaborate and, in certain dynasties, beauty soared to heights seldom achieved in all of history. The structural designs were actually pretty simple, nonetheless impressive and beautiful. The large scale was accomplished merely with great patience and the brute force supplied by slave labor. Their patience was in great part due to their underlying assumptions about temporal life as only a prelude to (or perhaps an interlude in) the over-life, possibly eternal existence in another dimension; the world of the divine. So they were unhurried and had no expectations of improvement, no concept of evolution, no particular direction. A great social advance had been made in the gradual, unplanned, and unforeseen emergence of a high civilization out of pointless nomadic wandering encountering the hit-and-miss uncertainties of primitive agriculture, but once that amazing development occurred, little of significance happened in Egypt for thousands of years. The idea of progress is completely modern.

Fear of death, then, might not be so natural as has been supposed, since life for most was not particularly comfortable and held no aspirations. That may be why Hobbes, father and inventor of modern political science, qualified that concept, and the universal fear of *violent* death, became the foundation of his 'social contract'—meaning, essentially, pain or punishment, more-so than death itself, constitutes the major pillar supporting society and provides the means of coercing civil behavior. The '2,000 year old man' [an improvisational comedy sketch recorded in the '60s by Mel Brooks & Carl Reiner] agrees, when asked how he managed for so long to escape the many dangers of life, that "Fear is the main source of propulsion". But for the ancients (and probably for us, if we examine it) it was fear of suffering rather than death. How else would someone as natural and wise as Socrates choose to drink hemlock brew rather than escape from Athens by law-breaking and bribery to live out his natural life at Crete?

Leo Strauss suggested that this decision might have been conditioned by old age. Had Socrates been a younger man, when his friends offered to fund the bribe and make the arrangements, he may well have chosen life. Was Socrates making only the relatively small sacrifice of his few remaining years, much the *lesser* part of his life, to make unusually demonstrable the point that one is duty bound to obey the laws of the polis in which one has freely chosen to live? -- Does the City not sustain him? -- Does he not owe his life to her laws? -- These were among his arguments for remaining in Athens to suffer what Athenian law demanded of him. Had he been significantly younger, would Socrates have sacrificed the *greater* part of his life to make that point? Strauss wonders, but leaves the question open. If his actions accorded with his belief in his argument, and if it were true that ancient cosmologies mitigated fear of death, his age would not make a difference in his decision. But wouldn't the point of his voluntary

death have been less pronounced, or even lost entirely had he not already gained a long established reputation as a sage? Thus, as a younger, not so established philosopher, it might be said he would be dying for no purpose. Would they still have built statues to him? Yet, if he escaped, perhaps nourishing hope of establishing his sagacity at some later time, as he continued to contribute to his beloved muse (Philosophy), why would anyone take seriously his arguments concerning justice and the importance of obedience to civil law? Would Plato still have been sufficiently enamored of Socrates' wisdom and opinions to make him immortal? Would Plato, too, have moved to Crete? Would political philosophy have been invented by someone else? Might not the Cretan welcoming committee have stoned this dangerous Athenian to death before he could contribute to the corruption of Cretan youth? Of course this is all speculation, but nonetheless instructive.

The pre-Greek world was an overwhelmingly religious world—a pagan world, to be sure: pantheistic and uncertain as to which gods were most powerful and which were beneficial to Man or which were his enemies. But religious doubters *per se*, actual atheists, were scarce. At least doubt did not rise to the level of philosophic speculation. That is, we have no record of it. No one had the audacity, it seems, nor any reason to teach or write tracts against the gods in general.



There was one mighty heretic, however (the exception proving the rule), who deserves mention in this regard: the **Pharaoh Akhenaten** (often spelled **Ikhnoton** [1379-1362 B.C.]. His original royal name was **Amenhotep IV**, after his father Amenhotep III of the 18th Dynasty. The 18th Dynasty saw sun dial obelisks and an intricate water clock. Also by this time, a 24-symbol alphabet was in use. [And just in advance of this age, as an aside, the earliest known civilizations were established in Mexico and the Sun Pyramid was erected in Teotihuacan.] Akhenaten took for his queen the subsequently equally famous Nefertiti, and became the father of even more famous Tutankamen). ‘Heresy’ may be an inappropriate term in his case. As a god, himself, or Son of the Sun, he could hardly be a heretic. He believed he was descended directly from the sun god, Ra – the spirit of the Aten (the sun disc). He also came to believe, as he grew up under the idea that he was related to the

race of gods (or, perhaps, was the son of the *only* god), that his obvious physical deformity was a kind of godly perfection (he had pronounced breasts, semi-womanly hips and form, and a very pronounced skull elongation). It has been suggested that he sometimes came naked with his queen to the public ‘window of appearance’ of his palace to demonstrate his godliness. He built many new monuments to the Aten, placed the disc image (along with his own) practically everywhere, and spent great amounts of the treasury on temples, sacrifices, and rituals. He openly favored the priests and acolytes of the cult of the Aten, elevating them above the previously upper-echelon priesthood of the Amon, even attempting to warp the existing belief system into a kind of monotheism under the one Sun god, Ra. It is clear that he intended the Aten as a god of the whole world, of all races and types; to free religion from the confines of a particular land or specific place, whereas the Egyptian gods had always been simply Egyptian. This seems

to be the first attempt to gather all of humanity under a single religious banner—a natural conclusion, practically unavoidable, since the sun shines everywhere and is the energy source necessary for all of life. In that, he was far ahead of his time.

This event is considered by some as the advent of monotheism. Actually, however, the other Egyptian gods were merely demoted to a kind of servitude to the Aten, not entirely rejected (except, perhaps, in the mind of Ikhnaton, who did try to erase the name of Amon from public monuments; even from his father's tomb). As might be expected, this new religion caused upheaval: confusion among the general population, intense rivalry between cults, and disputes between families of the nobility, including his own royal line. Obsessed with his notion of the pre-eminence of Ra among gods (and thus of himself among men as the son of Ra), he even went so far as to build a completely new capital city, Amarna, in an unspoiled site along the river, surrounded by hills that formed a sort of separate horizon, and he moved the central government away from Thebes and closer to Memphis, which had been the more ancient center of government.

He wasn't, of course, a god—and how could a mere human choke out all those other gods and prayers and rituals after thousands of years and preserve only the sun god in a reign of only 17 years—or even in 117 years—or 1700? Furthermore, Ra, though he was the power behind creation who oversaw everything, was lacking in form. The Aten had been worshipped in a thankful manner; out of gratification for heat and light, and for its continuous pouring forth of energy. But it had no 'personification' or anthropic image in the manner of the other gods. It did nothing in the way of judgmental or merciful acts—and, Akhenaten removed even what meager expectations of after-life had been extant in the old faith by openly denying it to the people who, perhaps, needed that promise the most. Immortality was reserved only for kings. Almost immediately after his death the changes he wrought were undone by his son—if it was his son (for it is possible, even likely, that Ikhnaton was sterile, characteristic of the disease causing his deformity). Tutankhamen (previously Tutankhaten) quickly brought the ship of state about and returned the capital to Thebes. Religion (and politics) returned to 'normal;' to the old polytheism, not to be challenged again, in Egypt, for many centuries.

Tutankhamen died at 18 (c.1350 BC) and the 19th Dynasty began with Seti I. Soon, under Rameses II (thought to be the Pharaoh of the Exodus and during the writing of the Gilgamesh epic) and Ramses III, the Government moved again, this time back to the more ancient capital, Memphis. This, then, the 19th Dynasty, is the period of the Ten Commandments and the formation of a new religion that would eventually change the ancient world. But it would have to last over a thousand years before it would have such an impact. This was the dawning of what Karl Jaspers and Lewis Mumford (independently) have called "the axial age".

By the concept of 'axial,' both Jaspers and Mumford sought to capture the pivotal shift of values which marked a heightened spiritualization of humanity through those personalities who sprang forth within a few hundred years of each other—Zoroaster, Plato, Buddha, Jesus and others..., the emergence of the universal religions..., and...the development of a new kind of person and a new kind of community.

[Eugene Halton; *BEREFT OF REASON: On the Decline of Social Thought and Prospects for Its Renewal*; Univ. of Chicago, 1995; p.56]



It is not clear (though assumed generally) that **Judaism** was more monotheistic at its inception than Ikhnaton's version. Even **Yahweh** speaks of 'other gods' when he demands to be 'before' them, perhaps *not* as the only god—but as the only God of the Israelites. In some versions of the Bible Yahweh refers to the other deities as 'false gods,' but the issue of interpretation is not resolved. Much about scripture is hidden behind wrong translations, purposeful alterations to suit some agenda, and the mists of history, since there is no original Bible—the several books and parts being assembled over many centuries. This much is clear: Yahweh did not make a covenant with the world, but only with the Israelites. That act fused these special people with their faith. They were not averse to war, but they did not consider world domination. Since God's covenant was made with a particular tribe, they became as His children. The religion—faith in Yahweh—was theirs alone; they did not try to spread it to others. There was no thought of saving alien souls. It took Christ and the concept of the brotherhood of man to make the Hebrew god available to outsiders. Thus Jews are generally not much interested in proselytizing. Their special mixture of blood with religion is something not widely understood by moderns under the influence of Christianity and Darwin. If, however, by reading scripture one should come to believe in the Old Testament and accept the Torah (if he could ever figure out what it all meant) and wished to follow the Word; and if he were to find a concurring rabbi to guide him, he might be welcomed in certain synagogues as Jewish, but he would not, thereby, become Hebrew, any more than a Ptolemaic Egyptian by his citizenship in Rome was transmogrified into an Italian. This double exclusivity, by race and by religion (both granted and imposed by the very god who, through His redesign by Jesus—Judaism's most outrageous heretic—became world dominant through recognition by Western influenced cultures as *the* God), is a differentiation established through Yahweh's visitation. This 'chosen people' aspect has been both the strength and the curse of Jews from the moment Moses became His mouthpiece.

While Judaism developed strength as a religion and the Israelites went through trials and tribulations –if special significance for their amazing endurance as a people, most of their early history has gained a place in the wider world's memory due to the much later dominance of the Jewish heresy—'The Way' of Christ. But the first monotheistic faith to actually become a force on the stage of world history is generally considered to be Zoroastrianism. Its 'bible' is the several books called *Avesta*. **Zarathustra (Zoroaster** to the Greeks who translated his books), according to his followers, is the only infant to have laughed at birth—perhaps 700 B.C., perhaps earlier (perhaps not at all). He (or his inventor) was certainly the first to discuss eschatology openly—last things; the end of the world, etc. (as also found in the Egyptian Book of the Dead, but in that case not for public consumption—still, a major discovery documenting the 18th Dynasty). This new religion became a world force, having been adopted as the official religion of Persia around 600 years before Christ, and well before many of the stories of the Bible found their way into written form. It was nearly wiped out by the Muslims in the 7th century A.D., although some of it is retained, or is strongly influential in the Koran. It still exists unadulterated in the province of Fars and in India (the Parsees), but in a larger sense its influence is still felt strongly in Judaism, Christianity, and Islam.



The **Zoroastrian** cosmos is one where reality is seen as the balance of opposing forces; mostly **darkness v. light**; evil v. good (Judaic version); heaven v. hell (Christian version) and Zarathustra even invented purgatory. In its outlines it is a strong contributor to Judaism/Cristianity/Islam as well as Manicheism, a Christian-Zoroastrian mutant belief out of which came St. Augustine.

Uncreated himself, the good god (Ahura Mazda – ‘Lord of Wisdom’) created the Universe (the Universe, therefore, is good). He was challenged by the evil demon, Angra Mainyu—later called ‘Ahriman’—who, presumably, does not create but destroys in the interest of dynamism/change/*re*-creation—so, in a sense, he creates by means of destruction. Thus the enemy of good also serves progress; the antithesis forces synthesis (or something brand new—super-thesis?) in a sort of pre-Hegelian proto-dialectic. But, again, what happened to monotheism?—unless, of course, Ahriman is not actually a god, but a servant of god; himself a creation of Ahura Mazda—which immediately brings up the question: If Ahura Mazda is good, why would he introduce evil to his universe? We’ll wait a little while for the Medieval Christian scholars to wrestle with that question in regard to Jehovah—but it is a question of significance, for it affects Judaism and Christianity, as well as Islam. Isn’t the devil, after all, a kind of god of darkness? And didn’t Lucifer break the synchrony of heaven by his disaffection and his mutiny against God? Don’t all the angels and Satan’s demons make up a kind of pantheon? And what about the doctrine of the Trinity?

Zoroastrianism, then, rather than strictly monotheistic, is actually the middle-eastern birth of dualism—the eternal clash and interpenetration of opposites, not unlike the oriental *Yin/Yang*. It should be mentioned here that Ahura-Mazda did not ‘create’ the Universe out of nothing, but seems to have organized things already in existence—marking-off, thereby, the dimension of darkness. At least he seems to have gained control of light, assigning the courses of the celestial bodies (not creating them) so as to restrict darkness, or to penetrate it. This leaves Yahweh as the first (perhaps the only) omnipotent God to create the All—something from nothing—the greatest of all miracles, defying the much more recently discovered principle of causality that opened the unbridgeable chasm between Judeo-Christian (as well as Islamic) theology and modern science—at least science as represented by classical physics.

Zarathustra recognized in Ahura-Mazda seven major attributes: Light, Good Mind, Right, Dominion, Piety, Well-being, & Immortality. These were interpreted, out of mental habit, as persons (not unlike the Judaic angels) by his followers who were steeped in polytheism—plus there were guardian angels sufficient in number for everyone to have his own. On the dark side, the helpers of Ahriman, as with the demons of Christianity, multiplied until they numbered in the millions. Ahura-Mazda’s prime attribute, Light, made fire a sacred element (an actual being, no doubt, to most folks of that period). It was most prominent in the Sun, which, perhaps in a revival of the spirit of Ikhnaton, became representative of the god—likely *was* God in the minds of Ikhnaton and his true converts.

Likewise seven major devils hovered constantly in the air to thwart him, tempting man to turn from righteousness (probably they were the negatives of Ahura-Masda’s ‘angels’), the chief of whom was Ahriman (Satan’s prototype)—something like every particle having its anti-particle in sub-atomic physics.

Rules and regulations of the Zoroastrian cosmos were revealed to the prophet and he preached them widely. Though his audiences were usually unreceptive, he did gather a small following of disciples who gathered his sayings and prayers into a collection of



Darius the Great

books called *Avesta*. While no original books have been found, two copies of a collection were made under direction of the Persian Prince Vishtaspa, whose recognition of its value gave Zoroastrianism the boost it needed. Later, **Darius I** [550-486 B.C.] (who may have been the son of *Vishtaspa*), perhaps seeing the potential for control behind this doctrine, declared war on the pagan deities and made Zoroastrianism the state religion. The writings, it was said, covered 12,000 cowhides. One copy was destroyed when Alexander the Great burned the palace at Persepolis. The other was stolen (rescued?) by the Greeks and translated. That, the Persians have since claimed, is where Greece came by all her later science and philosophy. But the argument dissolves when we notice that Aristotle—already the apex of Greek science, had been the tutor of Alexander as a young prince.

About that potential: What was that made Zoroastrianism useful to a tyrant like Darius? Zarathustra was the inventor of fire and brimstone. His hell went way beyond the lackluster Hades, the shadowy underworld generally representing the afterlife for pagans, where probably the worst thing that happened was that nothing happened at all. For Zoroastrians, hell was the very same as that taught by the screaming Christian preachers of damnation—because (unbeknownst to most of those preachers) that's where they got it. It was the perfect invention for control of behavior. Torture and dungeons were well known to be molders of proper behavior, but the law could be broken with impunity if no one witnessed the transgression. Zarathustra introduced the omniscient god who could see into one's soul. Thus there was no escape from punishment for breaking the laws of God—which were, conveniently, also the laws of the state. Of course there might be non-believers, but they were easily countered by making non-belief the worst sin of all, punishable by earthly torture of the worst sort—and in public—ending of course in a horrible death followed by eternal damnation. On the other hand, following the tenets of the faith to the letter would guide you safely, at the end of your life, over the 'sifting bridge' and into the arms of a young maiden with ample breasts. I could find no corresponding reward for faithful women, who (if they were of high status in the Persian society) lived lives of seclusion and always behind veils. Exception to this rule was made for lower class women who had to work for their husbands and families and thus were left to go about untrammelled in public. The exclusion also included concubines—perhaps because they were (1) desirable and (2) already irretrievably damned.

At any rate, the demise of animistic gods, often at odds with one another and yet having to cooperate to move the sun and moon across the sky and change the seasons and look after humanity and even support the Earth, left room for the discovery (or invention) of nature, and speculation as to the actual mechanics of the world-system. Its cosmogonic ideas were somewhat fruitful, but, though it was a powerful force as the state religion of

an aggressive people, Zoroastrianism seems to have had no effective hierarchy to organize missionaries. The Persians were not so interested in converting as in destroying their adversaries. So, while elements of this religion still exist, and while it is the first free religion to cross cultural, ethnic, and racial barriers, offering Ahura Mazda as *the* God, of-and-for everyone, was not its goal. It did not have the wherewithal to propel the greater part of humanity beyond the ancient mind-set. Still, by its concentration of metaphysical power in a single god—or a dueling duo—it set the stage for demythologizing and depersonalizing the denizens of the celestial sphere. This meant little to a Persia that imported all its science and arts. Zoroastrianism was a marvelous means of social control and its tenets encouraged the production of many soldiers. When Persia succumbed to decadence and to Alexander, Zoroastrianism faded away. This cracked open the door for the eventual acceptance of real astronomy: the study of the movement of celestial ‘things’ rather than the march of heavenly divinities; the science already developing under early civilizations’ successors, the post-Homeric Greeks, encouraging its spread through the known world on the back of Hellenism.

HANDOUT:

Ch. XII, ‘The Pythagoreans’ *from* ARISTARCHUS OF SAMOS: *The Ancient Copernicus*
by Sir Thomas Heath;
Dover edition, 2004, (*of* Oxford [Clarendon Press] 1913);
pp.94-120