

POLITICAL COSMOLOGY IN THE RENAISSANCE

Bodin, Kepler and the Reform of Astrology

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The Cosmos as a State

The term 'cosmic state' is derived from the work of historians such as Thorkild Jacobsen who studied those Mesopotamian cultures in which human society was an integral part of the natural and celestial environments, and in which astrology formed an essential component of political decision making.¹ The same label might also be applied to the medieval European societies in which it was believed that terrestrial politics could not be distinguished from celestial or divine intentions. In Aristotelian cosmology and Ptolemaic astrology these were mediated via the stars and planets which, it was believed, could then be used both to forecast the future and elect auspicious times for military and political action. Such an astrology and its underpinning theories constitute a 'political cosmology', in which the purpose of astronomy was the preservation of political order.

The problem of astrology's relationship with the Christian state had exercised some of the medieval worlds greatest minds, notably Roger Bacon, Albertus Magnus and Thomas Aquinas. The major attempt to reform astrology's political face were proposed by Jean Bodin (1530-1596) and Johannes Kepler (1571-1630) at the end of the sixteenth and beginning of the seventeenth centuries.

Kepler and Bodin shared the belief that, modernised and purged of its medieval dogma, astrology offered a valuable tool for managing the state and preserving political order. However, they both held to a medieval cosmology in which God's divine will could be communicated to the terrestrial authorities via the stellar and planetary spheres. Their attempt to restore astrology's political credibility thus harks back to first and second millennium Mesopotamia, when astrologers formed a caste of political advisers, and their vision of the cosmic state would have been familiar to any eighth century BCE Assyrian astrologer.

There is no study of medieval or Renaissance political or historical theory which deals with its astronomical and cosmological dimension. Hence there are virtually no published works on the Medieval cosmic state, a notable example being Arthur O. Lovejoy's 1933 work on *The Great Chain of Being*. However, that ancient political cosmology persisted, and that it shaped views of the state, is widely assumed. Eugenio Garin, for example, has written that, during the Renaissance, astrology constituted a 'precise philosophy of history based on a conception of the universe and characterised by a consistent naturalism and a rigid determinism'.² Garin's judgement was reinforced by Keith Thomas, who argued that 'During the Italian Renaissance astrological doctrines about the recurrence of planetary conjunctions and their

influence upon the course of affairs had helped to form the concept of a historical period'.³

Bodin's Life and Works

Jean Bodin was born at Angers in the County of Anjou in 1529 or 1530, the son of prosperous bourgeois parents.⁴ He arrived in Paris to be educated at the house of the Carmelite Order, home of traditional Aristotelian learning, but was also influenced by Plato and, possibly, by Calvin. He was called to the bar in 1561 and in 1571 he entered the world of high politics, becoming Secretary of Commands in the household of François, duc d'Alençon. In the turbulent politics of the time Bodin was at first actively identified with the *politiques*, the pragmatists who believed that the function of the state was to maintain order and only to interfere in matters of faith if political stability was threatened. Thus the absolute power of the monarch was to be balanced by the protection of minority rights.⁵ Bodin found the chance to argue for toleration as a member of the Estates General at Blois in 1576 where he made a number of recommendations including a passionate plea for negotiation to end the Wars of Religion which had torn the country apart since 1562. Much of Bodin's work arises out of the issues facing people such as him who wished to follow the dictates of their conscience without necessarily confronting the state. He demanded little more of the state than that it allowed both him and other dissenters the right to adhere to their individual beliefs.

In 1566 Bodin published his first major work, the *Method ad Facilem Historiarum Cognitionem*, a volume whose purpose is made clear in English translation: *The Method for the Easy Comprehension of History*. He followed this in 1568 with a contribution to economic debate, the *Reponse aux paradoxes de M. de Malestroicht, touchant le fait des monnaies et l'encherissement de toutes choses*. In 1576 he published his great work on political theory, *The Six Books of the Commonwealth*, commonly known as the *Republic*, and his last major work, the highly influential denunciation of neo-Platonic and Hermetic magic and witchcraft, *De la Demonomanie des Sorciers*, appeared in 1580. In 1594 he published an attempt to describe the universal system of nature, the *Novum Theatrum Naturae*. The unpublished *Heptaplomeres* was a search for the principles of universal religion. One theme, then, runs through Bodin's work, the quest for universal truth in both belief and the organisation of society, a vision we may compare with the Stoic universalism of the age of Alexander.

Bodin's goal was to discover the secret of stability in a politically unstable world, an ambition prompted by his experience of the uncertain times in which he lived. He was seventeen when Francis II came to power and persecution of the Protestants began in France. The wars of religion broke out in 1562, four years before the publication of the *Method*. The *Republic* itself was written during the midst of civil war. Indeed peace was only restored by the Edict of Nantes in 1598, two years after his death. As a witness to the destructive impact of political faction on the state he set out to establish the system of law, economy and political rights and duties which were essential to the smooth running of a just society. In so doing he is credited with the creation of modern jurisprudence, political economy, the theory of absolute monarchy

and, paradoxically, the concept of a state founded on a community of people, rather than on monarchical power, and governed partly by attention to individual political rights. This was to be accomplished within the framework of a reformed and rigorous astrological numerology. He wished to extend the cosmic order into the political order, the correct organisation of which, he believed, must be accompanied by an understanding of the laws of history as revealed through numerology, chronology and astrology. Indeed, Bodin's political and historical work may be viewed as little more than attempts to validate his cosmology.

Bodin's high regard for toleration arose out of his political experiences, as did his ambition to reform astrology. Indeed his new astrology was to serve a direct political purpose, to help solve the present religious wars and avoid future conflicts. He clearly intended his work to have definite practical value. The *Method*, for example, was to be a manual for the thinking statesman and his intention was to concentrate long and hard upon 'human activities and the rulers governing them',⁶ an ambition appropriate enough for any humanist. In doing this he would discover and illustrate the laws of historical change, enabling people to live in harmony with them. Yet, having established this worldly aim, he quickly prepared the ground for an astrological perspective. In the *Republic* he wrote that 'A true king is one who observes the laws of nature'.⁷ To do this it was essential to understand the patterns of nature in both their terrestrial and celestial guises. Once identified, these patterns could be extrapolated into the future to make accurate predictions. According to Manuel's succinct assessment, 'Armed with astrological and numerological foreknowledge Bodin's statesman might mitigate the influence of the stars or devise ways of assuaging their painful effects upon the body politic'.⁸ Bodin was convinced that his analysis of the astrological and numerological laws governing the rise and fall of states could be projected into the future to aid in the prediction of, and therefore the preparation for, future political crises.⁹

Bodin was one of a group of sixteenth and seventeenth century French historians, including Melchior Cano and François Baudouin, whose work represented a substantial move towards a modern critical approach to history.¹⁰ His enduring reputation was established by Pierre Bayle, who in 1697 described him as 'one of the most learned men that were in France in the XVIth century'.¹¹ In 1946 G.R. Collingwood enthusiastically described him as a principal figure in the Renaissance humanist revolution, whose 'positive fruits ...were found first of all in a great clearing away of what had been fanciful and ill-founded medieval historiography'.¹² Frances Yates wrote that the logic of his attack on Hermetic cosmology 'cut at the root of Renaissance magic with all its religious and cultural associations'.¹³ Arthur Marwick sees him as 'The great theorist of historical study...who declared the subject to be both of intellectual interest and pragmatic value for morals and politics: if studied carefully, he maintained, history did manifest certain orderly principles'.¹⁴ J.W. Allen considered that

'Bodin's claims to special honour consists, I think, in the fact that almost alone among sixteenth century thinkers, he made an honest attempt to construct a comprehensive theory of political society. All that we are rationally entitled to demand of such a system is that it should be coherent and intelligible and that it should not ignore or distort indisputable facts'.¹⁵

Bodin's great attack on fashionable protestant German historiography in chapter 7 of the *Method* (1566) is said to mark him out as the father of modern critical thought and his dismissal of the traditional idea of the degeneration of man through successive epochs is said to be responsible for the idea of progress.¹⁶ Yet, like so many giants of the sixteenth and seventeenth centuries, Bodin stood on the boundary between two world views. He criticised both Ptolemaic astrology and Hermetic magic, yet he wanted to reform astrology, not abandon it. For this reason he has also been subject to severe criticism. His first critic was his admirer, Pierre Bayle, who tempered his earlier, flattering judgement with the opinion that Bodin was 'a credulous man and infatuated with astrology'.¹⁷ J.W. Allen, also an admirer, remarks that in the *Republic* Bodin 'interlards the discussion with lengthy disquisitions on astrology and the magic that is hidden in numbers', taking this as evidence of deep confusion.¹⁸ M.J. Harman substituted abuse for argument, commenting that Bodin's theory of climatic and geographic influences 'is of course absurd: but it does not require much perception to see in it the ancestor thought of some much more modern asinities'.¹⁹ M.J. Tooley, the translator of the 1955 edition of the *Republic* excluded the astrological chapter, only one of five out of forty three chapters to be excluded.

It is more accurate to see Bodin's work as an intellectual bridge between the medieval and modern worlds. On the one hand his work can be shown to have inherited many assumptions from classical philosophy, the astrological theories of classical astronomers such as Claudius Ptolemy and such ninth to twelfth century Moslem historians as Al-Biruni and Abu Ma'shar, together with the Medieval millenarianism epitomised by Joachim of Fiore.²⁰ On the other hand its legacy in the post-Renaissance tradition of apocalyptic and millenarian historiography can be shown to extend from the 'New Science' of Giambattista Vico through to the German Idealism of Lessing, Schiller, Fichte and Hegel, the materialistic millenarianism of Marx and the universal history of Spengler and Toynbee.²¹

Frank E. Manuel eloquently summed up Bodin's role as the link between the ancient and modern worlds, describing him as one of the 'heirs to a great astrological tradition and contemporary witnesses of an astronomical revolution and the proliferation of a host of numerological theories (and) understandably curious about the relationship between the cycle of the nations and more measurable and objective scientific cycles in nature'.²² Thus Bodin's modernism was inextricably linked with his medievalism, and his position as a founder of modern critical historical thought and political theory cannot be separated from his attempt to reform astrology.

Bodin's Cosmology

Bodin's purpose, as is made clear in the title of the *Method*, was the comprehension of history. This, he also makes abundantly clear, was ultimately to be accomplished through the study of astrology and numerology combining in an analysis of planetary cycles: all history was to be understood in terms of cosmic cycles manifesting in terrestrial affairs and his extensive legal and constitutional recommendations should be considered within the context of his astrology. Bodin's hierarchy of causes, based on Aristotle and Ptolemy, passed from God, through number to astrology, 'climate'

(environmental factors), and the state to the individual (fig 1). His discussion of astrology is found in chapter 5 of the *Method* and book 4, chapter 2 of the *Republic*, in which he succinctly set out his plan of inquiry:

‘Seeing that there is nothing in this world which commeth to passe by chaunce or fortune, as all divines and the wiser sort of the Philosophers have with one consent resolved: Wee will here in the first place set downe this maxime for a ground or foundation, That the chaunges and ruines of Commonweals, are humane, or naturall or divine’.²³

In this scheme every single event had a purpose and a function together with a cause which itself may be traced directly to either human interference, climatic or geographical causes or divine will. Human activity in both its individual and collective forms, together with the range of causes grouped together as climatic, were themselves related to astrological influences which, in the Aristotelian scheme laid down by Claudius Ptolemy and updated by Thomas Aquinas, mediated between God and earth.²⁴ The ultimate authority was reserved for God:

‘I have, however, a firm conviction that [astronomical] regions and celestial bodies do not have the power to exercise ultimate control (a belief wrong even to entertain), yet men are so much influenced by them that they cannot overcome the law of nature except through divine and or their own continued self-discipline.’²⁵

Bodin’s astrology was aimed at enhancing freedom of choice through an understanding of the laws of nature and necessity as revealed in celestial cycles. ‘All change’, he wrote, ‘is voluntary or necessary, or mixedly both’.²⁶ In the version of astrological influence worked out by Thomas Aquinas in the thirteenth century, necessary causes were the result of astrological influences and were felt through human physical desires and needs, the individual need to eat, reproduce and survive and the collective desire to make war or rebellion. Voluntary causes emanated from the soul, which was in direct communion with God.

Pierre Bayle gave a flavour of the religious imperatives behind Bodin’s astrology, attributing to him the opinion that

‘...comets are spirits who, having liv’d innumerable Ages on Earth, and being at last come nearer Death, celebrate their last Triumph, or are brought again into the Firmament as shining stars. This is attended with Famine and Pestilence etc. because the Cities, and the People lose the Governours who appeased the Wrath of God’.²⁷

Thus it was possible to mitigate or overcome inauspicious astrological omens and enhance auspicious ones through correct religious practice or a direct appeal to God through prayer. Of course, one could only do this once the astrological patterns had been read and understood.

Bodin’s goal was the management of the future rather than its mere prediction, in itself an activity of limited value. Both Lucus Gauricus and Nostradamus had been

credited with accurately forecasting the death of Henry II in a jousting accident, which had taken place in 1559, an event which had precipitated the end of religious toleration and the onset of civil war. Without compensatory action the forecast, however accurate, was essentially useless. Bodin did not mention this incident, though he cannot have been unaware of it. Neither can he have been unaware that unless the date of the forecast was specifically stated, there might be little that could be done to avoid it. Thus, a further key to successful political management lay in the pursuit of astronomical accuracy.

Bodin accepted the traditional doctrines that historical change was regulated by planetary cycles beginning with the shortest-term, the monthly lunar cycle, which was especially important if it culminated in an eclipse, and moving up to the long-term cycle of the Jupiter-Saturn conjunctions. His complaint was that as a result of the poor record of astronomical observation and accuracy there had to date been no authoritative work on the historical significance of these cycles. The situation was so bad, he claimed, that one astronomer might state that a planet was retrograde while another might say it was direct in motion. Bodin's specific attacks on Ptolemaic zodiacal geography and Jerome Cardan's astrological history, together with his general criticisms of the horoscopes for the world or for towns and cities, may therefore not be seen as indicating doubt in relation to astrology as such. These flaws in an otherwise indispensable system might be resolved by the systematic study of the correlation of historical events with astronomical patterns, and numerology.

Bodin claimed that his discussion of numerology in relation to the changes of empires in Book 4, Chapter 2 of the *Republic* was the first serious investigation of the subject. He found that the most important numbers were 7 and 9, and the most fatal 63 (i.e. 7 x 9). He noted that St. Augustine congratulated himself on passing his 63rd year and that Aristotle, Boccaccio, St. Bernard, Erasmus, Luther, Melanchton and others had all died aged 63. Extending his conclusions from the individual to the collective, he found that 496 (i.e. 7 x 70 plus a perfect number, 6) was the number which measured the rise and fall of states: 'All cities in the revolution of five hundred years do suffer either some great change or else some utter ruine'. He produced as evidence the erroneous claims that the ascent of Augustus to supreme power at the Battle of Actium was separated from the abdication of Romulus Augustulus, the last Western Roman Emperor, by 496 years and that the same span of time separated this event from the coronation of Charlemagne, whereas, taking the three dates as 31 BCE, AD 476 and AD 800, the real figures were 507 and 324 years respectively. Bodin's Pythagorean, Platonic approach to chronology thus clashed with the available evidence.

He freely admitted that his system of historical analysis was imperfect on the grounds that only God can know everything, but he insisted that at least it had more to recommend it than the astrological conjectures of Jerome Cardan, who, he said, believed that the fate of all great empires depended on the tail of the Great Bear. He rejected Cardan's belief that this constellation had been overhead at the foundation of Rome and that it was responsible for the rise of the empire. He also attacked the common practice of casting a horoscope for the creation of the world.

Bodin's interest in the planets was based primarily on the numerologically significant fact that there were seven of them rather than on account of their astrological influence. He believed that, understood mathematically, the cycles of the planets were the orderly agencies of God, the first and original cause, providing the grid against which history might be measured. Such a pious attitude underlay Bodin's unquestioning acceptance of the Hebrew chronology that the world was 5,500 years old and his rejection of the Egyptian contention that it was 10,000 years old.

Bodin's Criticism of Astrology

In his 'Letter' on astrology, published in 1555, Bodin wrote that astrology was 'the most beautiful science in the world', but that problems arose from its abuse, the word astrologer becoming synonymous with that of sorcerer.²⁸ As such doubts suggest, his primary concern over astrology's legitimacy was religious. It did not matter, for example, whether astrology could or could not be used to cast the horoscope of Christ. What mattered was whether this was impious. Such an attitude would certainly square with the moral stance which was so important to Bodin's political philosophy. This concern with morality undoubtedly surfaced again in the *Demonomanie*.

Other points of disagreement with the conventions of astrological historiography were philosophical. Neither music nor astrology, Bodin believed, could be a perfect guide to history, as both were relatively imperfect, being governed by number and therefore lesser factors in the hierarchy of causation. Astrology was thus inherently uncertain as well as technically flawed. Yet before astrology could be of practical use, it had to be purged of its inaccuracies. Only number, which was closest to God, offered a totally accurate analysis of historical change.

Bodin devoted his greatest effort to refuting the geographical correlations with the zodiac formulated by Ptolemy in which particular areas of the world were allotted to various of the twelve signs. He brought forward various reasons to support his argument. Quite simply, it was absurd to divide the globe neatly into four quadrants and have each ruled by one of the triplicities, or groups of three signs. In Ptolemy's scheme, outlined in book 2, chapter 3 of the *Tetrabiblos*, Aries, Leo and Sagittarius ruled all of Europe except the Balkans, Cancer, Scorpio and Pisces ruled north Africa, Gemini, Libra and Aquarius ruled western and central Asia and Taurus, Virgo and Capricorn ruled Mesopotamia, Persia and India. Bodin regarded these attributions as both completely arbitrary and in contradiction of the available evidence:

'Moreover he [Ptolemy] called the Jews, the Syrians and the Idumaeans bold and impious, because they were subservient to Aries, Scorpion [sic] and Mars. By unanimous agreement of all historians the Syrians are tractable to the point of servility; the Jews were born for religion. Nothing can be more pliant than the Idumaeans'.²⁹

Such was Bodin's contempt for this scheme that he doubted whether a man as great as Ptolemy could have written the *Tetrabiblos*. The misleading correspondences between

national characteristics and zodiac signs were bad enough. The final blow, though, was delivered by the precession of the equinoxes, and in the sixteenth century the twelve ecliptical constellations no longer occupied the same regions of the heavens as the signs of the zodiac which shared the same names, and in Ptolemy's time had occupied the same regions of the sky. Bodin estimated that since Augustus' time precession had resulted in a shift of the constellations of 17 degrees relative to the signs of the Zodiac. Ptolemy's error, he continued, was compounded by the fact that he had underestimated the rate of precession, showing himself to be a weak astronomer as well as a poor astrologer. In fact it was Bodin who was wrong, apparently assuming a rate of precession of approximately one degree every ninety four years as against the true rate, measured by Ptolemy, of one degree every seventy two years. Nevertheless, Bodin was insistent that astronomical accuracy was essential to the long-term goal of political stability.³⁰

He also dismissed Cardan's attempt to salvage Ptolemy's zodiacal geography by adapting it to precession. For example, according to Bodin, Cardan claimed that the Spanish, Britons and Normans, formerly ruled by Sagittarius, were now ruled by Scorpio. They had therefore lost their true and loyal Sagittarian virtues and, like the Scorpion, had become rapacious and cunning. Apart from the fact that Ptolemy had attributed rulership of the Britons to Aries and not Sagittarius, a point on which Bodin did not comment, he found no more relevance in Cardan's version than in the Greek original.

Bodin also maintained that the orbits of the superior planets, Jupiter and Saturn, whose cycle was the conventional focus of astrological historiography, also revealed alleged errors in Ptolemy's scheme. For example, he pointed out that while the civil war prior to the founding of the Roman Empire coincided with a Jupiter-Saturn conjunction in Scorpio, a 'water' sign connected to north Africa, the actual change of government took place in Europe which was ruled by the fiery triplicity: Italy, and hence Rome, was ruled by Leo.

Bodin thus rejected one important facet of Ptolemy's scheme of historical causation, the strict zodiacal rulership of precise regions of the globe, while retaining the concept of climatic influences such as topography and weather. His rejection of certain features of classical astrology though, was matched by his refusal to accept aspects of modern astronomy. He rejected Copernican heliocentric theory as absurd, for once finding common cause with Ptolemy. Consequently he also dismissed Copernicus' alleged belief that historical change depended on the eccentric motion of the Earth. Bodin's conservative attitude to Copernicanism compares with the progressive line taken by some of his contemporaries such as the astrologer John Dee and the mystic Giordano Bruno, both of whom were enthusiastic supporters of the Sun-centered solar system. When it came to astronomy, Bodin the moderniser took a reactionary stance, while the advocates of mystical cosmology and magical astrology took a progressive line.

The Reform of Astrology

Having identified astrology's weaknesses, Bodin examined its positive aspects. Like many other sixteenth century scholars he drew lessons from the great conjunction of 1524 when Mars, Jupiter and Saturn united at the tenth degree of Pisces. All the other planets, as well as the Dragon's Head, Bodin reported, had either been in Pisces, a watery sign, or Aquarius, the sign of the water-carrier and, in the fevered period which accompanied the early years of the Reformation, great panic had ensued as astrologers forecast a deluge of Biblical proportions. The flood's embarrassing refusal to materialise produced a reaction against astrology, and Bodin himself cited this as the most serious of all recent astrological errors. Yet, he reasoned, if astrology was in principle true, it should be possible to avoid such mistakes, a work which could only be accomplished by going back to first principles:

'Yet doubt I not but that some more certain precepts might be given of the chaunges, and ruines of Commonweales if a man would enter into a certain account of the time past even from the beginning of the world'.³¹

Bodin defined his task. First a chronology of events must be established. Secondly this must be compared to planetary cycles, especially to eclipses and to the Jupiter-Saturn conjunctions. The correlations between terrestrial events and celestial cycles must then be related to number, which was both more reliable than astrology and superior to it. Finally the appropriate conclusions must be based on 'Most evident and manifest arguments' as opposed to the 'vain conjectures' which had formerly held sway.

Bodin's published research along these lines is not extensive. We may take this as evidence that, contrary to his manifesto in favour of detailed research he did little such work himself. He did, however, bring forward certain anecdotal accounts. For example, he cited the Peloponnesian War as just one of many such events whose commencement coincided with a significant eclipse. There was, he concluded, no doubt that changes in commonwealths were defined by celestial cycles.

In a more radical move, the doubts prompted by precession of the equinoxes led him to reject the signs of the Zodiac entirely:

'Moreover, what they [the Chaldeans] have given us about the Signs of the Zodiac is altogether indefensible, since all parts of the Zodiac and whole signs have changed place since the time of their observation. For the first star of Aries, which occupied the first part of this constellation for six hundred years before Ptolemy, has arrived at the twenty eighth part...'.³²

Precession, Bodin believed, had so altered the zodiac that it was futile to suggest that Augustus and Cosimo de Medici had anything in common as a result of both being born under Capricorn (Augustus was born with the Moon in Capricorn).

The only two references to natal horoscopes in either the *Method* or the *Republic* both refer to planetary position in terms of diurnal motion, such as the rising of Mars, rather than in terms of the zodiac.³³ The absence of zodiacal reference points which made it necessary for Bodin to construct another framework. This he found in chronology, relating planetary cycles to number in terms of the periods of time

between the conjunctions of any two planets under consideration. This was hardly innovative, yet combined with a rejection of the zodiac, foreshadowed Kepler's attempted astrological reform.

The Three Phases of History

If Bodin's goal was the management of history for the good of all, then the final piece of his programme required the formulation of a proper theory of historical change. The two standard medieval theories of historical periodisation divided history into either four epochs, which took its authority from the book of Daniel, Plato's *Republic* and *Hesiod's Works and Days*,³⁴ or three, derived from a mixture of Plato and scripture. Bodin considered that the theory of four epochs was tainted by its association with German Protestant historiography, largely because two of its recent protagonists had been Martin Luther and Philip Melanchthon.³⁵

The fourfold theory owes its origins to solar mythology, the movement of time through history being analogous to the passage of the Sun through the four seasons, usually represented by the four 'fixed' signs of the zodiac, Taurus, Leo, Scorpio and Aquarius.³⁶ Like the fourfold model of history, the threefold system is based on a unified theory of the cosmos in which space and time are completely interdependent and organised according to the same laws. It may be either lunar in conception, reflecting the threefold nature of the Moon goddess, or an adaptation of the equation of historical phases with the three forms of the deity found in some eastern Mediterranean mythology and described by Plato: sky god (father), earth goddess (mother) and world saviour (child).³⁷

In the common Christian version of the tripartite theory of history, the first epoch was that of God the Father, the period of the Old Testament, the second the era of Christ or God the Son, whose text was the New Testament, and the third and final epoch was that which followed the second coming, the era of God the Holy Spirit. Thus terrestrial history mirrored the divine trinity. This belief in three phases was devoutly held and had been given tremendous authority in the thirteenth-century millenarianism of Joachim of Fiore.³⁸

Bodin's theory, outlined in chapter 5 of the *Method* and book 4, chapter 1 of the *Republic*, was based on division of all existence, including time and consciousness, into three forms (fig. 2). There were three levels in the cosmos; a celestial world of the stars, an intellectual world of the mind and an elemental world of the birth and death of physical things. From this he projected three types of people, southern, temperate and northern, inhabiting six zones of the world, three north of the Equator and three to the south. In the northern hemisphere the torrid zone occupied latitudes 0 to 30 degrees north, the temperate zone 30 to 60 degrees north and the frigid zone 60 to 90 degrees north. In the southern hemisphere the zones occupied the equivalent degrees with the exception of the frigid zone, which came to an end at 75 degrees south, there being, Bodin claimed, no information for the polar region. The sceptic might be forgiven for finding this division of zones even more rigid than Ptolemy's,

although in practice Bodin allowed exceptions on the grounds of local topography and climate. For example, the mountainous Swiss and Florentines had developed democratic forms of government, which were normally associated with northerners, on account of environmental factors which overruled the conditions arising from their habitation of the temperate zone.

History itself was organised into three great epochs, each of 2,000 years. The first epoch, which lasted from the creation in 4000 BCE, to 2000 BCE, was dominated by southern peoples and marked by the development of religion, for which he believed the contemplative southern temperament was particularly fitted. The resulting state was theocratic. The second epoch, which lasted from 2000 BCE to the beginning of the Christian era, was dominated by the temperate peoples and saw the rise of government and the political arts. The final epoch, which he believed was due to last until AD 2000, was dominated by the northern peoples, who excelled in mechanical invention and warfare.

Bodin ascribed planetary rulers to all the three epochs, arranging them in their descending 'Chaldean' order from Saturn to the Moon, but excluding the Sun, which 'like a fountain of light will be common to all'.³⁹ Accordingly the first epoch was ruled by Saturn, the second by Jupiter and the third by Mars. Continuing the sequence of planets, each epoch was given a second ruler, the first Venus, the second Mercury and the third the Moon. The planets were more than the mere quantitative measuring points that Bodin's numerology might have suggested and the celestial order was qualitatively completely mirrored in the terrestrial order.

In keeping with medieval practice, the planets lent their qualities to their respective periods. These Bodin related directly to Chaldean tradition. Thus Saturn, signifying contemplation (according to Brown) or understanding (in Reynolds' translation), ruled the earth when religion and philosophy were born. Jupiter, planet of action and 'execution', was dominant during the second phase, bringing the rise of government and those political arts which were necessary to control men when the piety of the first age proved insufficient. Mars, planet of production and war, was the clear signifier of the warlike and mechanically inventive northern Europeans. In fact Bodin referred to these people as the 'children of Mars'.⁴⁰

These assertions were justified by a series of geographical, cultural, historical and sociological observations. Evidence for Jupiter's rulership of the second epoch he found in the fact that thunder and lightning, ruled by Jupiter, originated in the second, temperate, zone. Thus climatic causes in their meteorological form were introduced to demonstrate the interdependence of space and time and their joint regulation by the number three. Mars could be shown to rule the third epoch by similar arguments. For example, Plato wrote that Mars ruled the arts and crafts, and according to Bodin this planet was therefore associated with craftsmen in their role as producers of goods. Was this, he reasoned, not the cause of the inventive genius of the Germans and Britons and of the fact that their technical assistance was considered vital in the mines and industry of the people of the middling zone, such as the Spanish and Portuguese?

Bodin was a convinced believer in the essential historicity of myth arguing, for example, that Hesiod's description of Jupiter's revolt against Saturn possessed a

factual basis as an account of the social change that took place when the first epoch was transformed into the second.⁴¹ He placed the entire scheme in the context of a planetary body politic, again starting from a disagreement with Plato who, he claimed, equated soldiers with the heart, magistrates with the brain and common people with the liver. Rather, Jupiter ruled the heart, Saturn the spleen, Mars the gall bladder and the Moon the liver, a system which differed from the usual scheme in which Jupiter ruled the liver and the Sun the heart. The northern people therefore received the dual benefit of the Moon, which nourished the elemental earth, regulating the tides together with all biological processes, and of Mars, which nourished the body via the gall bladder.

Further evidence was cautiously plucked from the doctrines of natal astrology:

‘If then, we are to have faith in the astrologers, those who have Mars in the ascendant at their birth will be either soldiers or skilled workers...those who have the moon (prominently placed) in their horoscopes are said to be exceedingly strong and healthy’.⁴²

Such qualities were clearly demonstrated by the Scythians, whom Caesar declared to be particularly warlike and are therefore typical martian subjects. Thus the individual enters Bodin’s scheme as the possessor of a horoscope providing a connection directly to the heavens, mediated by but also bypassing the superior level of the cultural group or historical epoch. When Bodin argues that the state should defend minority rights he was acknowledging that diversity in human nature is itself the natural consequence of astrology.

The nature of the state itself owed more to climatic factors, that is to the totality of environmental factors from celestial to geographical and meteorological influences, than to cultural or individual ones, which in Ptolemy’s scheme of historical change were inferior causes. For example, Bodin considered that the English failure to subdue the Scots was a consequence of their inability to operate politically or militarily in the Scottish environment. Similarly he reasoned that even if the French ever managed to successfully invade England they would be unable to impose their own political system, which had evolved from conditions peculiar to France. Thus pragmatism and toleration were cosmically sanctioned. As Tooley wrote, ‘it is only when his cosmological ideas are taken into consideration that the full significance of his relativist view on politics are to be appreciated.’⁴³

Bodin’s delineation of the types of state was derived from Aristotle, replacing the original scheme of six types of state with his own system of three; monarchy, the rule of the individual, aristocracy, the rule of the minority (his personal preference), and democracy, the rule of the majority.⁴⁴ In addition to these legitimate forms each state had two degenerate forms making nine varieties of state in all. There were six types of revolution between the legitimate states and eighteen between the degenerate. In addition a state could be ruled by a type of government derived from another. Republican Rome, for example, was a democracy governed by an aristocracy. In the context of the times Bodin’s theory was thoroughly conservative. He rejected the modern interest in the mixed constitution which allowed for flexible analysis of each system of government on its own terms, preferring to see political organisation as

governed by the same numerological principles which controlled the division of space and the passage of time. It was analysis of all human society in terms of the number three that was to open the door to comprehending human history: 'From this distribution, as it was, of all three peoples, we shall understand more plainly the power of nature'.⁴⁵

However, while Bodin's concern with environmental factors in politics was to influence Montesquieu, his traditional definition of the environment as including the stars and planets took place too soon before astrology's decline to survive with the rest of his work. As Tooley commented, '...the fact that he based his doctrine of environment on a cosmological system which was on the point of being abandoned at the very time he was writing partially contributed to the oblivion which was the fate of this part of his work'.⁴⁶

Bodin and Kepler

Before Bodin's advocacy of a reformed political cosmology was forgotten though, he attracted a powerful and sympathetic supporter in Johannes Kepler. Johannes Kepler was born in 1571, the year when Bodin began his life at court, and five years before the publication of the *Republic*. Their working lives overlapped in the 1590s, when Bodin was in his sixties and Kepler still in his twenties. Indeed, the young Kepler devoted an entire chapter of the *Harmonice Mundi* to a critique of Bodin's harmonic philosophy of history. Bodin's work had clearly made quite an impact on Kepler, for he was quick to respond: although the *Republic* was published in 1576, a Latin edition did not appear until 1586 while the edition cited by Kepler appeared in 1591. The *Harmonice Mundi* itself was planned in 1599, three years after Bodin's death, although not published until 1619. Aiton, Duncan and Field conclude that Bodin's theories 'fascinated Kepler, in spite of crucial differences'.⁴⁷ Kepler himself wrote of Bodin's demonstration that 'God the creator has embellished this work of his by joining the ratios of equal and of similar in one concerted harmony' that 'I agree with his purpose' and 'In this passage Bodin touches my heart by referring to the themes of my *Secret of the Universe*, though in ignorance'.⁴⁸

In the *Harmonice Mundi* Kepler confined himself to a discussion of Bodin's political theory, particularly the three forms of the state, the popular, aristocratic and royal, discussing the relationship between these and the arithmetical, geometrical and harmonic respectively, summarising Bodin's arguments. Bodin's overall approach appeals to Kepler, even if Bodin's specific arguments are often flawed. However, unlike Bodin, he made the move from theoretical cosmology into practical astrology.

Kepler's attitude to astrology has been a matter of some debate for, while a practising astrologer, he followed Bodin in criticising the body of astrological tradition. In March 1598 he wrote to Maestlin '...I am a Lutheran astrologer, I throw away the nonsense and keep the hard kernel', but as Judith Field has pointed out, the definitions of 'nonsense' and 'hard kernel' changed over time.⁴⁹ Astrology was an essential part of Kepler's theology. In 1610 he wrote that:

‘The human being, however, with his soul and its lower powers, has such an affinity with the heavens, as does the surface of the Earth, and this has been tested and proven in many ways, of which each is a noble pearl of astrology, and is not to be rejected along with [all of] astrology, but to be diligently preserved and interpreted’.⁵⁰

Like Bodin he favoured a mathematical approach and regarded astrology as perfectly natural, a logical extension of the harmonies he perceived throughout the universe. Astrology was a matter of making the right measurements and Bodin and Kepler had no use for, say, Nostradamus’ clairvoyance or John Dee’s conversations with angels.

Whereas Bodin confined himself to astrological theory, Kepler actually began work on the empirical research advocated by Bodin, developing an astrology based on planetary cycles, free from zodiac signs and horoscope houses.⁵¹ In his experimental forecasts for the year 1601, Kepler took the first tentative steps towards the research programme which was necessary for creation of Bodin’s perfect cosmic state. Kepler made cautious predictions, warning of the possibility of defeat should there be war with Poland at the time of the Mars-Saturn conjunction in August and September.⁵² Once such problems had been foreseen, they could be guarded against by military leadership: ‘a great safeguard for the army lies in their loyalty to and high regard for their commander; for every victory depends on a driving force of the spirit’.⁵³ Such leadership might be combined with sensible political management: ‘it is preferable for peace and quiet to prevail, and sedition is feared, let meetings not be held in August and September, or let them be broken up, or better yet, let the causes exasperating people’s dispositions be taken quickly away, or by the introduction of some new deterrent, let their minds be changed’.⁵⁴ Following Bodin’s pragmatism, Kepler’s cosmic state would manage dissent by social and political reform where possible, but propaganda and repression if necessary. We can, perhaps, see him helping to prepare the groundwork for twentieth century social-democracy.

Both Bodin and Kepler are portrayed as reformers, and as founders of the modern world view, Bodin in the fields of jurisprudence, political science and historical theory, Kepler in astronomy. However, their contribution to the creation of the modern world may be seen partly as a product of their self-conscious attempt to reform an astrological tradition which dates back to second millennium BCE Mesopotamia (even though the astrological records available to them extended only as far back as Ptolemy) in line with Pythagorean, Platonic and Aristotelian cosmology and, particularly in Kepler’s case, devotion to scripture. Thus, the intellectual revolution of which they were a part was stimulated by the wish to recreate the past as much as by the desire to build the future. Neither succeeded, for by the end of the seventeenth century astrology as a whole, whether traditional or reformed, was not considered a fit tool for historical study or political analysis. The cosmic state in Europe, in its ancient form, was dead.

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4. For Bodin's life see Campion, 'Astrological Historiography in the Renaissance' in Annabella Kitson (ed), *History and Astrology: Urania and Clio Confer*, London 1989, pp 95-98.
5. For a summary of Bodin's political thought see Roger Scruton, *Dictionary of Political Thought*, London 1982, p. 42. See also Laurence C. Wanlass, *Gettell's History of Political Thought*, 2nd ed., London 1955, p. 183, J.S. McClelland, *A Study of Western Political Thought*, London, 1966. pp 281-4, Frank E. Manuel, *Shapes of Philosophical History*, London, 1965, pp. 57-60, Tooley, *Republic*, pp. xvi-xxxiii. For more detailed analysis see Julian H. Franklin, *Jean Bodin and the Sixteenth Century Revolution in the Methodology of Law and History*, London and New York 1963, Julian H. Franklin, *Jean Bodin and the Rise of Absolutist Theory*, London and New York 1973.
6. Bodin, *Republic*, preamble; see Frederick Copplestone, *History of Philosophy*, Vol. III, p. 324.
7. Bodin, *Republic*, Book 2, chapter III.
8. Manuel, *Philosophical History*, p. 63.
9. Manuel, *Philosophical History*, p. 138.
10. See Julian Franklin, *Jean Bodin and the Sixteenth Century Revolution*, esp. pp. 116-117. See also Manuel, *Philosophical History*, p 60.
11. Pierre Bayle, *An Historical and Critical Dictionary*, Vol. 1, p. 651.
12. R.G. Collingwood, *The Idea of History*, Oxford 1946, p. 57.
13. Frances Yates, *The Occult Philosophy in the Elizabethan Age*, London, 1979, p 71. Bodin's attack was published in his *De la Demonomanie des Sorciers*. For a full account see Baxter in Sydney Anglo (ed.), *The Damned Art, Essays in the Literature of Witchcraft*. Yates also noted that to be a *politique* could result in charges of magic or sympathy to magic: see *The Rosicrucian Enlightenment*, London, 1972, p 110.
14. Arthur Marwick, *The Nature of History*, London, 1973, p. 30.
15. J. W. Allen, 'Jean Bodin', in F. J. C. Hearnshaw (ed.), *The Social and Political Ideas of Some Great Thinkers of the Sixteenth and Seventeenth Centuries*, London, 1926, pp 44-5.
16. Bodin, Jean, *Six Books of the Commonwealth*, abridged and trans. M. J. Tooley, (Tooley, Republic), London 1955, p 99.
17. Halbronn, Jacques, 'The Revealing Process of Translation and Criticism in the History of Astrology', in Curry (ed), *Astrology, Science and Society*, Woodbridge 1987, p 211 citing Bayle, *Dictionary*. Halbronn considers that Bayle did not even consider Bodin a 'sincere critic' of astrology. It would be much safer to call Bodin a critic, not of astrology, but of other astrologers. Interestingly Bodin's desire to reform by returning to the roots foreshadows Newton's attempt to reform cosmology by returning to the roots of Judaeo-Christian theology, a programme which resulted in the removal of every astrological influence except comets.

18. Allen, 'Jean Bodin', p. 45.
19. M. Judd Harman, *Political Thought from Plato to the Present*, London and New York, 1964, p. 209. Harman identifies Bodin as an ancestor of nineteenth and twentieth century racism.
20. See Campion, 'Astrological Historiography' pp 98-102, Halbronn cites Bodin's frequent reference to Ibn Ezra and Maimonides, as in his 'Letter' on astrology published in 1555, Halbronn, Jacques, 'Astrology', p. 208. See also Nicholas Campion, *The Great Year*, London, 1994, chaps. 12-13.
21. See for example Norman Cohn, *The Pursuit of the Millennium*, London 1957, p 109; Campion, *The Great Year*, chaps. 14-16. See R. G. Collingwood, *The Idea of History*, p. 56, for the connection between medieval and modern millenarianism.
22. Manuel, *Philosophical History*, p 60.
23. Bodin, *Republic* book 4 chapter 2. Tooley summarised Bodin's views: 'Their (the stars) perpetual and complex revolutions in their circular orbits around the earth are the cause of all phenomena and all changes of any kind. All things, from a grain of corn to a commonwealth, are moulded by the place and time of their occurrence, and their life and histories governed by the movement of the heavens. Hence his view of history is the record of recurrences, The historical process must be cyclic rather than evolutionary since it proceeds from the circular motion of the heavens (p xxxiii).
24. Claudius Ptolemy, *Tetrabiblos*, books, 1 and 2, Thomas Aquinas, *Summa Contra Gentiles*, Dominican Friars in England, Burns, Oates and Co., London, 1924, Vol 1, chaps 83, 85.
25. Bodin, *Republic*, book 4 chapter 2.
26. Bodin, *Republic*, book 4 chapter 1.
27. Bayle, *Dictionary*., citing Bodin, *Theatro Natura*, Book 2, pp. 221-2. Bayle was not sure how to interpret this belief, suggesting that perhaps Bodin was referring to dying angels rather than human spirits. Bayle's uncertainty is hard to explain, for Bodin was revealing quite clearly his acceptance of a major plank in the canon of the astral-religion long perpetuated by Neoplatonists, one with which he cannot have been unfamiliar. Bodin's attempt to reform astrology was born of a desire to demonstrate certain of its fundamental truths.
28. See Halbronn, 'Astrology', p 208.
29. Bodin, *Method*, chapter 5, *Republic*, book 4, chapter 2.
30. Halbronn notes that Bodin's concern with astronomical accuracy lay behind his attack on August Ferrier's Treatise on astrology of 1550. Ferrier's critical response in his *Advertissements a M Jean Bodin sur le quatrieme livre de sa Republique* (1580), prompted a reply from Bodin under the pseudonym Rene Herpin. This bitter argument was only terminated by Ferrier's death. See Halbronn, 'Astrology', p. 208.
31. Bodin, *Republic*, book 4 chapter 1.

32. Bodin, *Method*, chapter 5. In contrast with his earlier statement, Bodin here correctly assumed a rate of precession of one degree every seventy two years.
33. Bodin, *Method*, chapter 5.
34. Campion, *The Great Year*, esp. chap 8, 10.
35. Nicholas Campion, 'Astrological Historiography' pp 104-6.
36. Campion, *The Great Year*, p 279, 327
37. Plato, *Timaeus*, 50D, Popper, *The Open Society and its Enemies*, 2 Vols, London and New York, 1945, Vol I, p 211 - 2, Campion, *The Great Year*, pp 279-81.
38. Campion, *The Great Year*, pp 369-79.
39. In the Chaldean order, which had of course been debunked by Copernicus' revival of heliocentric theory, the planets are arranged from the Moon to Saturn in order of their apparent velocity of travel around the Earth. This order was also supposed to represent their distance away from the Earth. Clearly Bodin had absorbed Copernicus's influence in some matters but not in others.
40. Bodin, *Method*, chapter 5..
41. Bodin, *Method*, chapter 5.
42. Bodin, *Method*, chapter 5.
43. Tooley, *Republic*, p. xxxiii
44. Bodin, *Republic* Book 4, chapter 1, Tooley, *Republic*, p xxix, 129, Aristotle, *Politics*, III.
45. Bodin, *Method*, chapter 5, Hesiod, *Works and Days*, 110-140.
- 46.. Tooley, *Republic*, p. xxxix.
47. Kepler, Johannes, *The Harmony of the World*, 1619 trans. E.J. Aiton, A.M. Duncan, J.V. Field, p 255, n 203, p 278.
48. Kepler, *The Harmony of the World*, 1619, p 278.
49. Kepler to Maestlin, 15 March 1598, letter 89, l. 177, KGW 13, p. 184, cited in Field, *Kepler's Geometrical Cosmology*, p 127. See also for Kepler's astrology, Kollerstrom, Nick, 'Kepler's Belief in Astrology', in Annabella Kitson (ed), *History and Astrology: Urania and Clio Confer*, London 1989 and J.V.Field, 'Astrology in Kepler's Cosmology', in Curry (ed), *Astrology, Science and Society*, Woodbridge 1987.
50. Johannes Kepler, *Tertius Interveniens*, Thesis 64, trans Ken Negus, *Culture and Cosmos*, Vol. 1, no 1, Spring/Summer 1997, p 52)
51. Like Bodin Kepler proposed abandoning the traditional structures of zodiac signs and houses. See Halbronn, 'Astrology', p 208.

52. Johannes Kepler, Kepler, Joahannes, *On the More Certain Fundamentals of Astrology*, Prague, 1601, Thesis 72. See also Kollerstrom, 'Astrology', pp 159-160).

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Fig. 1: Historical Causation in Bodin's Political Cosmology

GOD

NUMEROLOGY

(The mathematical laws regulating the universe)

ASTROLOGY

(The cycles and conjunctions of the planets)

CLIMATE

(The physical environment, geographical and meteorological factors)

THE COMMONWEALE

(The community of citizens united in the state)

THE INDIVIDUAL