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# A brief history of astrology: Based on modern science 

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#### Abstract

Modern science is divided into three major branches which consist of the natural sciences like Biology, Chemistry and Physics. In this modern science born from astrology and tremendously developed last 500 years and ignoring astrology due to a drastic and far-reaching change in ways of thinking and not believing. Why astrology straight away ignored from modern science, the answer is there was no explanation given in scientific manner. So in this paper established in a brief history of astrology, through scientific manner.


Keywords: Astrology, planets, horoscope or zodiac, ascendant or lagna, rasi, stars or nakshatras, light, gravity

## Introduction

## Missing planets (Uranus, Neptune and Pluto)

Many of the scientific society is not accepting horoscope, because some of the planets (Uranus, Neptune and Pluto) are missing in the horoscope. And also the actual solar system is based on heliocentric system, were as astrology is followed as geocentric system ${ }^{[1]}$. These two reasons not fair to reject the astrology, because astrologers felt about the stars/stars groups apart from the solar system. In this stars/stars group are very long light years distance as compared to Uranus, Neptune and Pluto. So astrologers to well knew about missing planets and heliocentric system many 5000 years BC back. The horoscope is well prepared to base on the biological background. In the earth livings started from one cell and reached to top most living as a human. Human is the only one having sixth sense and top most brain capability, these are all due to biological reasons. This biology driven from physics and chemistry, so astrology first confiscate these two driven factor in the form of light and gravity. The Fig. 1 shows heliocentric system of solar family without Uranus, Neptune and Pluto. In this solar system sun is having light source and more gravity; due to mass of the sun all other planets rotate the sun in their own orbit. The whole astrology appears to be based on the principle of sunlight and gravity. Sunlight is an electromagnetic wave of radiation and particles. Sunlight falling on the earth directly from the sun, or by reflection, or deflection and reflection from or by modulation by celestial bodies like Mercury, Venus, Moon, Mars, Jupiter, Saturn. Sunlight is essential for flora and fauna to flourish on the Earth ${ }^{[2]}$. The percentage of reflection and deflection are changed due to planetary positions. Uranus, Neptune and Pluto sunlight reflection and deflection percentage is very less and gravitation pull/push is very less in earth. Due to these missing planets distance (from earth and sun) has no biological impacts in the human being. So in these biological aspects these planets are missed out in horoscope.

## Stars and shadowy planets

Another one question was raised from scientific society; some stars/stars group and shadowy planets are included in horoscope. The answer is moon, why? The moon is earth's satellite and the moon has important capability to receive the light source and reflected to the in and around earth surface. All human being well know about the moon's reflection, in the form of new moon day to no moon day. In this moon's luminance consist of both sun light and 27 stars/ stars group as shown in fig.1. Universe has more numbers and more type of stars, like hot stars, cold stars, and bright stars etc., but astrology is using only 27 stars/stars group, why? The answer is biological aspects, same as per the missing planets explanation and also by using fixed frame reference $\left(12 \times 30^{0}\right)$ in mathematical consideration. Another one is shadows, the shadows being happened moon rotate to the earth.

The moon creates shadow on earth surface and earth creates shadow on moon surface. These two shadows happened in umbra region and penumbra region, this shadows knowing in humans only at the time of solar eclipse and lunar eclipse as shown in fig.2. In astrology, these two shadows namely called
it's as Rahu and Ketu. These two shadows are splitting the more useful biological infrared (IR) rays and Ultraviolet (UV) rays from sun light, in these rays create more biological effects to flora and fauna on earth. That's why these two shadows are included in astrology horoscope.


Fig 1: Heliocentric system of solar family without Uranus, Neptune and Pluto


Fig 2: Solar and lunar eclipse (Shadow planets)

## Zodiac design (Rasichakram and rasi chart)

Astrology consists of two major part one is mathematical part and prediction part. This mathematical part is based on science. First and foremost astrology is created to Rasi Chart and Navamsa Chart based on individual human birth time. In this rasi chart is mathematical model of individual human being and consist of 9 planets ( 2 Shadows +7 physical body planets), 27 stars/stars group and 9 Sun light colors (2 invisible colors +7 visible colors).The Fig.3a shows rasichakram, in this rasichakram were converted from heliocentric system to geocentric system and included in shadow planets. The earth circumference $360^{\circ}$ is divided in to $12 \times 30^{0}$, based on the fixed frame reference on non-rotating 27 stars/stars group. The $30^{\circ}$ bandwidth stars/stars group are
inter connected and get some animal images. This animal image circle is call for Zodiac ('Circle of Animals' in Greek language) ${ }^{[3]}$. The names are as follows Aries, Taurus, Gemini, Cancer, Leo, Virgo, Libra, Scorpio, Sagittarius, Capricorn, Aquarius and Pisces. Based on this rasichakram, the rasi chart were prepared. The rasi chart consists of 12 houses, each house having $30^{\circ}$ and houses are divided in to 6 houses based on sun light sources and 6 houses based on moon light sources as shown in fig.3b. The earth is always having two light sources one from sun light at $180^{\circ}$ for day time and another one is from moon light $180^{\circ}$ at night time. Primary light source is sun, as per the rasi chakra sun is hold the $5^{\text {th }}$ orbit, so $5^{\text {th }}$ house is allotted to sun in rasi chart and Leo is the house name.


Fig 3: 3a) Rasi chakra, 3b) Rasi chart, 3c) Moon nodal precession, 3d) Different aspects of shadowy planets

As compared to heliocentric system and geocentric system, the rotating earth and non-rotating sun are interchanged. The interchange is taken into account and sun is replaced as earth in $5^{\text {th }}$ house. The moon is always near the earth and heliocentric system planets are rotates in anticlockwise, so moon is holding the $4^{\text {th }}$ house of the rasi chart. The day and night or primary light source and secondary light source wise the sun and moon are acquiring $5^{\text {th }}$ and $4^{\text {th }}$ house in rasi chart. All other terrestrial and gas giants' planets are acquiring the one house, for each day and night (or) primary light source and secondary light source side based on the ascending order of the orbiter revolution days. Hence Mercury (88 days) acquiring $6^{\text {th }}$ house at sun side and $3^{\text {rd }}$ house at moon side, Venus ( 225 days) acquiring $7^{\text {th }}$ house at sun side and $2^{\text {nd }}$ house at moon side, Mars ( 687 days) acquiring $8^{\text {th }}$ house at sun side and $1^{\text {st }}$ house at moon side, Jupiter (4333 days) acquiring (10756 days) $9^{\text {th }}$ house at sun side and $12^{\text {th }}$ house at moon side and finally Saturn acquiring $10^{\text {th }}$ house at sun side and $11^{\text {th }}$ house at moon side.
The rasi chakra's first orbit is having two nodes, first one is ascending node (Rahu) and second one is descending node (Ketu), these nodes are $180^{\circ}$ each other. These nodes are at the intersection point of earth orbit and moon orbit as shown in fig.3c. Due to sun gravity pull/push, the moon orbit takes the precession. This is called nodal precession of moon orbit; period is about 6793 days ( 18.60 years) for full cycle of
moonorbit ( $360^{0}$ ) ${ }^{[4,5]}$. Fig.3c A1 and A2 two ascending nodes and between $30^{\circ}$; this $30^{\circ}$ precession period is 566 days ( 1.6 years). This ascending node (Rahu) and descending node (Ketu) are used for rasi chart as a shadowy planets, the above nodal precession period is used for mathematically in rasi chart. The shadow does not have any physical body, so not holding the houses in rasi chart. As compared fig. 2 and fig.3c, the different aspects of Solar and Lunar eclipse shown in fig.3d. In science namely call it's as Total, partial, Annular and Hybrid Solar and Lunar eclipses. This Solar and Lunar eclipses are not happens every month, due to earth's and moon's orbiter $5.1^{0}$ angle difference.

## Light and gravity clocks

## Kendra

Newton's first present gravitational theory and Albert Einstein's re-correct gravitational theory, but in astrology many 5000 years back using this gravity. The fig 4 a and 4 b is shows the cross-section view of earth, based on the light and gravity. The fig 4 a shows one light clock and another one is gravitational clock, based on the sun light four time zones are arrived $6.00 \mathrm{AM}, 6.00 \mathrm{PM}, 12.00 \mathrm{AM}$ and 12.00 PM . These time zones point were inter connected one square was obtained, this square points is called for Kendra ${ }^{[6]}$ in astrology ( $1,4,7 \& 10^{\text {th }}$ houses in rasi chart).


Fig 4: Earth cross-sections based on light and gravity

## Trikonas and ascendant or lagna

Another one is gravitational clock, while considering the beings living on a sphere it is easy for us to differentiate between the sphere and some plane surface: we actually see that sphere being curved. But when it comes to us, and our curved space, we cannot see it since this would entail our standing outside space and looking down on it ${ }^{[7]}$. Gravity make sphere triangle, they find that all three lines make $90^{\circ}$ angles with each other, so that the sum of the angles of this triangle is $270^{\circ}$, knowing that angles in all flat triangles always add up to $180^{\circ}$ they conclude that the world they live on is not a flat one. Pythagoras' theorem only holds on flat surfaces ${ }^{[7]}$. The $90^{\circ}$ angles sphere triangle split the earth outer surface as each $120^{\circ}$. This sphere triangle points is called for trikonas ${ }^{[6]}$ in astrology ( $1,5,9^{\text {th }}$ houses in rasi chart). The inter section point of light clock and gravitational clock is called for ascendant or lagna ${ }^{[6]}$ ( $1^{\text {st }}$ houses in rasi chart) in astrology.

## Dasa period

Newton discovered electromagnetic color spectrum that is visible to the human eye in year $1704{ }^{[8]}$, the colors are Red, Orange, Yellow, Green, Blue, Indigo and Violet ${ }^{[9]}$. Frederick William Herschel discovered infrared (IR) invisible rays just beyond red in sunlight color spectrum in year $1800^{[10]}$ and Johann Wilhelm Ritter was discovered Ultraviolet (UV) invisible rays just beyond violet in sunlight color spectrum in year $1801{ }^{[11]}$. And also Johann Lambert's described effective solar radiation is received on earth surface $\left(120^{0}\right)$ through Lambert's Law ${ }^{[12]}$. As per heliocentric system and geocentric system, earth's rotation is shifted to sun and non-rotating sun values like electromagnetic color spectrum are shifted to
earth, So Newton's gravity law (vs) visible and invisible electromagnetic color spectrum values and Lambert's law values are associated and incorporate in non-rotating earth in astrology as shown in fig. 4(b). The gravitational clock value is $120^{\circ}$ at earth outer surface, Lambert's law solar radiation value is $120^{\circ}$ at earth outer surface and summation of electromagnetic visible \& invisible color spectrum value is $120^{\circ}$. The electromagnetic color spectrum values are Infrared (IR) $7^{0}$, Blue $20^{\circ}$, Orange $6^{0}$, Indigo $10^{0}$, Red $7^{0}$, Ultraviolet (UV) $18^{0}$, Yellow $16^{0}$, Violet $19^{\circ}$ and Green $17^{0}$. In this visible and invisible electromagnetic color spectrum values are used in astrology as Dasa period ${ }^{[6]}$ calculation many 5000 years back for knowingly or unknowingly.

## Retrograde, rasi type, moolatrikona, exaltation and debilitation <br> Retrograde (Vakra)

Retrograde motion is the apparent motion of a planet in a direction opposite to that of other planets within its orbit, as observed from earth to a particular fixed star point alignment. For example fig. 5 a compared earth and mars motion in its orbits, E1, E2 \& E3 orbit motion position of earth and S1, S2 \& S3 are fixed star/star group. When standing on the earth's (E1) position looking up at the sky, the mars is aligned with S3 star and earth is aligned with S1 star, then E2 position earth \& mars are align with S2 star and E3 position mars is aligned with S1 star \& earth is aligned in S3 star. Both earth and mars are keeping in forward motion, but due to speed different mars alignment with fixed star from earth illusion get reverse direction, in this retrograde action which is called for vakra ${ }^{[6]}$ in astrology.

| S.No | Planets | orbitary <br> Days | Synodic <br> Periods | Normal <br> Days | Retrograde <br> Days | Retrogration <br> Angular Size |
| :---: | :--- | ---: | ---: | ---: | ---: | ---: |
| 1 | Sun (Earth) | 365 |  |  |  |  |
| 2 | Moon | 27.32 | 29.53 |  |  |  |
| 3 | Mercury | 88 | 116 | 92 | 24 | $\pm(14-21)$ |
| 4 | Venus | 225 | 583 | 533 | 50 | $\pm(25-28)$ |
| 5 | Mars | 687 | 780 | 706 | 74 | $\pm(140-145)$ |
| 6 | Jupiter | 4333 | 399 | 277 | 122 | $\pm(115)$ |
| 7 | Saturn | 10756 | 378 | 238 | 140 | $\pm(110)$ |

5(b)


5(a)

Fig 5.1: Retrograde


5(c)

| S.N | Planets | Exaltation | Debilitation | Moolatrikona |
| :---: | :--- | :--- | :--- | :--- |
| 1 | Sun | Aries | Libra | Leo |
| 2 | Saturn | Libra | Aries | Aquarius |
| 3 | Mercury | Virgo | Pisces | Virgo |
| 4 | Venus | Pisces | Virgo | Libra |
| 5 | Mars | Capricorn | Cancer | Aries |
| 6 | Jupiter | Cancer | Capricorn | Sagittarius |
| 7 | Moon | Taurus | Scorpio | Taurus |

5(d)

Fig 5.2: Rasitype, moolatrikona, exaltation and debilitation

The Sun, Mars and earth are aligned in same axis on every 780 days at different fixed star position, due to the per day orbit revolution difference 74 days retrograde illusion loop will appeared every Sun, Mars and earth aligned cycle and remaining 706 days is normal appearance. The table 5b is listed the Mercury, Venus, Mars, Jupiter and Saturn retrograding days.

## Rasi type

The fig 5c shows rasi type based on sun light on earth surface and earth rotation due to gravity. Time zones (vs) gravity, human eye (or) brain feels the sun light intensity/movement 6 AM to 10 AM is fast, 10 AM to 2 PM is slow and 2 PM to 6PM both fast \& slow. As per the fig 4 a , the rasi chart are split in to four part with holding $90^{\circ}\left(4 \times 90^{\circ}=360^{\circ}\right)$ and shown in fig $5(\mathrm{c})$, based on the light clock (four $90^{\circ}$ angles square) and gravitational clock (three $90^{\circ}$ angles sphere triangle). Each $90^{\circ}$ further split in to three $30^{\circ}\left(3 \times 30^{\circ}=90^{\circ}\right)$ and first $30^{\circ}$ named as Sara rasi (fast), second $30^{\circ}$ named as Sthirarasi (slow) and third $30^{0}$ named as Ubhayarasi (fast \& slow) ${ }^{[6]}$. The Aries, Cancer, Libra \& Capricorn are Sara rasi, Taurus, Leo, Scorpio \& Aquarius are Sthirarasi and Gemini, Virgo, Sagittarius, \& Pisces are Ubhayarasi.

## Moolatrikona

The rasi chart is prepared on the basis of geocentric system and to maintain the mathematical symmetry, the terrestrial and gas giant's planets are acquiring the two houses in rasi chart, but real is heliocentric system. The real heliocentric system orbiters number positions are marked as Moolatrikona ${ }^{[6]}$ in rasi chart, the planets Moolatrikona places are listed in table 5d. The astrology believes Mercury, Venues \& Jupiter are getting good strength at day time and Moon, Mars \& Saturn are getting good strength at night time. From planets strength point of view and heliocentric system orbiters number point of view, the Moolatrikona places were allotted as per the fig 5 c . Some astrology text denotes Moolatrikona degrees Sun $1^{0}-10^{0}$, Moon $4^{0}-20^{0}$, Mars $0^{0}-12^{0}$, Mercury $16^{0}$ $-20^{0}$, Jupiter $0^{0}-10^{0}$, Venus $0^{0}-15^{0}$ and Saturn $0^{0}-20^{0}$ that is also correct for degree wise, because planets orbit path is not fixed one, due to gravity some orbit movement is there. Both house and degree are matched that house planet get origin
(Moolam) or real /original orbital position of heliocentric system, it's called as Moolatrikona in astrology.

## Exaltation and Debilitation

The earth seasons are caused by the $231^{1} 2^{\circ}$ tilt of Earth's equator to the plane of the ecliptic and the parallelism of the axis that is maintained as Earth orbits in the sun. The plane of the ecliptic (the $90^{\circ}$ sun angle) is directly on $231^{1} 2^{\circ}$ equator latitude, that month during Earth's orbit is called the summer solstice in India for the month of March (Caitra) ${ }^{[12]}$. The earth receives $90^{\circ}$ sun rays is called for exaltation, in exaltation earth gets more solar radiation and debilitation earth gets less solar radiation. Likewise terrestrial and gas giants planets also gets more solar radiation at exaltation point and debilitation point gets less solar radiation. The exaltation sign is shown in fig 5 c and degree is also mentioned and debilitation sign is $180^{\circ}$ opposite from exaltation sign for same planet. The planets exaltation and debilitation houses are listed in table 5 d . In earth the sun exaltation points are varied at different latitude, hence human biology also varied like height, weight and skin color etc. at different continents.

## Astrology vs. human anatomy

In modern science many human evolution theories were currently discussed, but not yet got any proven result still now ${ }^{[13]}$. But astrology is designed on the basis of human anatomy system; astrology believes human biology is first driven from physics and second one is chemistry. So astrology first confiscates physics factors in the form of light and gravity. The figure 6a shows the human anatomy digestive system and figure 6b shows the human anatomy skeletal, respiratory, muscular, circulatory and nervous systems. The skeletal, respiratory, muscular, circulatory and nervous systems as compared to digestive system, except digestive system other systems are holds mirror image of RHS side and LHS side. Many astrology texts told that human life span is 120 years based on the DASA periods. The DASA period is derived from electromagnetic color spectrum and allotted to Ketu 7 years, Venus 20 years, Sun 6 years, Moon 10 years, Mars 7 years, Rahu 18 years, Jupiter 16 years, Saturn 19 and Mercury 17 years.

Right Hand Side
(RHS) 60

Left Hand Side
(LHS) 60

Fig 6a: Human anatomy digestive system


Fig 6b: Human anatomy with various systems
Sun Mercury Venus Moon Ketu Rahu Mars Jupiter Saturn


Fig 7: Astrology DASA periods values

The astrology gives the values to human anatomy RHS side 60 and LHS side 60, except digestive system and resultant values is 120 based on the DASA periods values. The figure 7 shows the various DASA periods values used in astrology. In this figure interior planets DASA period resultant values is 60 (Sun 6, Mercury 17, Venus 20, Moon 10 and Ketu 7) and exterior planets DASA period resultant values is 60 (Rahu 18, Mars 7, Jupiter 16 and Saturn 19), as per the astrology earth is not holding any astrophysics values. Hence earth is taken care of all chemistry values (digestive systems) and light and gravity take care of skeletal, respiratory, muscular, circulatory and nervous systems in human anatomy. Gravity made $90^{\circ}$ angles sphere triangle split the earth outer surface as each $120^{\circ}$. This sphere triangle points $1^{\text {st }}$ house is Lagna (Father), $5^{\text {th }}$ house is children and $9^{\text {th }}$ house is Grandfather. So gravity also maintained biological cycle as per the astrology. In circulatory system the heart does not hold mirror image; the heart is common for all other systems in human anatomy, in this compared with solar system as sun is common for all planets.

## Dasaperiod vs. Human biological order

The Dasa period is derived from solar electromagnetic color spectrum; it's already discussed based on fig 4 b . In modern science application oriented, in this electromagnetic color spectrums are used to various fields and spectrums values are used mathematically like frequency and temperature etc. The Indian physicists C.V. Raman invented and explained why earth sky in blue color based on electromagnetic color spectrum frequency and his Raman spectroscopy is used to analyze a material, gases, liquids, biological organisms and human tissue. But in astrology only visible and invisible colors frequency ranges are used apart from frequency range Radio, microwave, X-Ray \& Gamma are not used and mathematically unit's value is used in degree not for frequency range. And also spectrum colors orders are differed in between science and astrology, because science is used some tools to shows the spectrum, but astrology only follows the nature and not used any tools and colors orders are correlated to human's biological order.
The human biological order sequence is started from 1.Chromosome (23 numbers) - (Infrared- Ketu), 2. Chromosomes $23+23$ add up only at after intercourse, Sperm and egg have merged into one single cell (Blue - Venus) 3. Cell multiplication up to fetal stage (Orange- Sun) 4. Fetal fertilization (Indigo - Moon) 5. Energy transferred from mother bolt to baby bolt (Red - Mars) 6.DNA growth based on parent's heredity (Ultraviolet- Rahu) 7. Over all baby formation like human (Yellow - Jupiter) 8. Waste energy extraction / Cells life time (Violet- Saturn), up to above 8 stages are mandatory human biological sequence. Finally brain capability (Knowledge) started after birth (or) some ones having good brain capability by birth (Green- Mercury). Then again human growth/life cycle started as per real planets order (Fig 7) wise from Mercury to Saturn. The human biological order sequence is invisible as like solar electromagnetic color spectrum and human growth/life cycle is visible as per real planets order. The DASA period value 120 is not human life span, it's denotes only a human anatomy value. As per real planets value the human life span is $95(120-(7+18))$ in practically, it's also based on human biological order, human growth cycle and input of the chemistry values (digestive systems).As per the biology DNA to be reduced in Chromosome with heredity information and Chromosome will grow to DNA as on parents heredity, in this
action is denoted as Rahu \& Ketu in astrology and hold the first orbit with $180^{\circ}$ each other, that's why astrological planets strength wise Ketu is got first position \& second one is Rahu. In India temples Rahu \& Ketu statues are look like similar format of DNA \& Chromosome and five face snake denoted for Chromosome number $(2+3=5(23))$, that's why Rahu \& Ketu mainly include in astrology.

## Conclusions

Astrology is designed on the basis of human biology (Vs) astronomy. The human is superimpose of 1.Skeletal, 2.Respiratory, 3.Muscular, 4.Circulatory, 5.Nervous systems, 6.Reproduction system and 7.Digestive system and with Chromosome \& DNA likewise astrology rasi chart is also superimpose of Heliocentric system, Geocentric system, Stars/Stars group, Shadowy planets, Retrograde, Rasi Type, Moolatrikona, Exaltation and Debilitation. This paper is established through scientific manner and adaptation into it for gravity and solar light electromagnetic color spectrum, which the genesis of all the principles of astrology in the design of Zodiac, and with correlated to human biological order, human anatomy and human growth cycle, and also within $120^{\circ}, 9$ color spectrum and 9 Stars/Stars groups are maintained the mathematically symmetry from Sun to Stars/Stars groups as fixed frame reference is 36 and in $360^{\circ}$ the fixed frame reference is 108 and in-between Sun and Stars/Stars groups planets revolution $\left(360^{\circ}\right)$ positions are taken in mathematically as degree wise from earth view.

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