

Primary Directions

A Predictive Tool of Astrology

Aakhut Em Bak

TABLE OF CONTENTS

1. PROPORTIONAL SEMI-ARCS

1.1 Equatorial coordinates	3
1.2 Direct and converse primary directions	4
1.3 The proportional semi-arc formula	5
1.4 Directing in the lower eastern sky	7
1.5 Directing in the upper western sky	8
1.6 Directing in the upper eastern sky	8
1.7 Directing in the lower western sky	9
1.8 The Ptolemy and Naibod time-keys	10
1.9 The SR and LR time-keys	13

2. THE GENERAL FORMULA

2.1 The primary-direction formula	15
2.2 Directing toward the Ascendant	15
2.3 Directing toward the Descendant	17
2.4 Directing toward a meridian angle	19

3. SOME OF MY PRIMARY DIRECTIONS

3.1 Introduction	20
3.2 The direct Jupiter-PC10 square: calculation	20
3.3 The direct Jupiter-PC10 square: visualization	22
3.4 The converse Moon-PC10 conjunction: calculation	24
3.5 The converse Moon-PC10 conjunction: visualization	27
3.6 The direct Mercury-PC1 trine: calculation	29
3.7 The direct Mercury-PC1 trine: visualization	31

Bibliography	34
------------------------------------	----

Index	35
-----------------------------	----

1. PROPORTIONAL SEMI-ARCS

1.1 Equatorial coordinates

[\[Back to TOC\]](#)

The term ‘primary directions’ refers to techniques that use primary motion to predict events. In order to deal with the mathematics of primary directions, we will be using the **equatorial coordinate system**, which enables us to specify the location of any point of the celestial sphere in terms of pertinent values of longitude and latitude. Equatorial longitude (called **right ascension**) is angular distance measured along the equator, going from 0° to 360° as we go eastward from the March equinox point. Equatorial latitude (called **declination**) is angular distance (along the celestial sphere) from the equator, going from 0° to $+90^\circ$ as we go perpendicularly northward and going from 0° to -90° as we go perpendicularly southward.

If you are using the sidereal zodiac, then converting from sidereal ecliptic coordinates to equatorial coordinates involves going from sidereal ecliptic coordinates to tropical ecliptic coordinates and then to equatorial coordinates. Adding the *ayanāmśa* to a sidereal ecliptic longitude yields its equivalent tropical ecliptic longitude, while tropical ecliptic latitude equals sidereal ecliptic latitude.

Both tropical ecliptic longitude and right ascension are measured from the March equinox point. Going from tropical ecliptic coordinates to equatorial coordinates is a conversion from one system of spherical coordinates to another. Consider a point of the celestial sphere that has tropical ecliptic longitude λ and ecliptic latitude β . Its right ascension RA and declination δ satisfy the equations

$$\begin{aligned}\cos \delta \times \cos(RA) &= \cos \beta \times \cos \lambda , \\ \cos \delta \times \sin(RA) &= \cos \varepsilon \times \cos \beta \times \sin \lambda - \sin \varepsilon \times \sin \beta , \\ \sin \delta &= \sin \varepsilon \times \cos \beta \times \sin \lambda + \cos \varepsilon \times \sin \beta ,\end{aligned}$$

where the **obliquity** ε is the angle between the ecliptic plane and the celestial equatorial plane (which is the same as Earth’s equatorial plane).

The obliquity is a slowly varying angle for which we will be using the approximation

$$\varepsilon \approx 23^\circ 26' 21.406'' - 46.836769'' \times T ,$$

where T is the signed number of Julian centuries since the epoch J2000.0. A **Julian year** is defined as exactly 365.25 days of 86400 seconds each. The epoch J2000.0 is a particular instant of time that is Saturday, 01 January 2000 at approximately 12:00 UTC. Note that T is positive for dates after the epoch and negative for dates before the epoch.

We find that

$$\delta = \arcsin(\sin \varepsilon \times \cos \beta \times \sin \lambda + \cos \varepsilon \times \sin \beta) .$$

On defining the **equinoctial distance**

$$ED := \arccos\left(\frac{\cos \beta \times \cos \lambda}{\cos \delta}\right),$$

we get

$$RA = \begin{cases} ED & \text{for } \lambda < 180^\circ \\ 360^\circ - ED & \text{for } \lambda > 180^\circ. \end{cases}$$

Note that equinoctial distance is angular distance measured along the equator, going from 0° to 180° as we go eastward or westward from the March equinox point.

TABLE 1.1: Ecliptic latitudes for aspect copies

Aspect Copy	θ_A	β_A/β_0
Duodecile	30°	$+\sqrt{3}/2$
Sextile	60°	$+1/2$
Square	90°	0

Aspect Copy	θ_A	β_A/β_0
Trine	120°	$-1/2$
Quincunx	150°	$-\sqrt{3}/2$
Opposition	180°	-1

In order to get the ecliptic latitude of an aspect copy, we will use the **Bianchini aspect circle**. On the celestial sphere, this great circle passes through the parent planet's location and intersects the ecliptic at the two points corresponding to the planet's square aspects. In this regard, we will take each square copy to lie on the ecliptic at an intersection point, and we will take the opposition copy to lie at the point that is opposite the parent planet's location. It follows that the ecliptic latitude of an aspect copy having signature angular separation θ_A is given by

$$\beta_A = \beta_0 \times \cos \theta_A$$

where β_0 is the ecliptic latitude of the parent planet. TABLE 1.1 presents pertinent results.

1.2 Direct and converse primary directions

[\[Back to TOC\]](#)

Earth's axial rotation gives rise to **primary motion**. From the point of view of an earthbound observer, primary motion is perceived as Earth remaining at rest while the surrounding celestial sphere and everything on it (including the zodiacal belt) rotate about Earth's line of poles. It is useful here to imagine two celestial spheres that occupy the same volume of space – the active sphere and the fixed sphere. The **active sphere** is the celestial sphere undergoing its usual axial rotation according to primary motion. The **fixed sphere** is the celestial sphere as it appeared at a specific time of interest, which could be a birth time, a solar-return time, or a lunar-return time. Primary motion moves the active sphere across the stationary fixed sphere.

From the point of view of an earthbound observer, primary motion causes the zodiacal belt (with the planets attached to it) to rotate backward through fixed houses of the local sky. A **primary direction** is the process of primary motion directing a given point of the active sphere backward through the houses toward a given point of the fixed sphere.

Each primary direction is associated with a predicted event. One of its two points is called the **significator**, and it indicates the area of life in which the predicted event will occur. The other point is called the **promissor**, and it indicates that which promises (that is, gives grounds for expecting) the predicted event. A primary direction is said to be **direct** if primary motion directs a promissor lying in the active sphere toward a significator lying in the fixed sphere. A primary direction is said to be **traditionally converse** if primary motion directs a significator lying in the active sphere toward a promissor lying in the fixed sphere. A primary direction is said to be **neo-converse** if reversed primary motion (which is a what-if notion) directs a promissor lying in the active sphere toward a significator lying in the fixed sphere.

A primary direction results in an **arc of direction**, which is the circular path along which primary motion has directed the active point (which lies in the active sphere) toward the fixed point (which lies in the fixed sphere). A primary direction is associated with a predicted event, and the angular length of the associated arc of direction is related to the time when the event is predicted to occur.

1.3 The proportional semi-arc formula

[\[Back to TOC\]](#)

The horizon and the meridian are great circles of the celestial sphere. The horizon (which contains the Ascendant and the Descendant) is the boundary between the upper sky (which contains the Midheaven) and the lower sky (which contains the Imum Coeli). Moreover, the meridian (which contains the Midheaven and the Imum Coeli) is the boundary between the eastern sky (which contains the Ascendant) and the western sky (which contains the Descendant).

A **quadrant-house system** uses the horizon and the meridian to divide the local sky into four quadrants: the lower eastern sky (which contains the 1st, 2nd, and 3rd Houses), the lower western sky (which contains the 4th, 5th, and 6th Houses), the upper western sky (which contains the 7th, 8th, and 9th Houses), and the upper eastern sky (which contains the 10th, 11th, and 12th Houses). The varying angular sizes of these quadrants result in houses of unequal angular size. The **cusp** of a house is the boundary that marks the beginning of that house. In a quadrant-house system, the Ascendant lies in the 1st-House cusp, the Descendant lies in the 7th-House cusp, the Midheaven lies in the 10th-House cusp, and the Imum Coeli lies in the 4th-House cusp.

In applying the method of primary directions, we are working with an astrological chart that is cast for a specific time of interest, which could be a birth time, a solar-return time, or a lunar-return time. For the time of the chart, consider an active-sphere point *A* and a fixed-sphere point *F* that lie in the same quadrant. The active point lies zodiacally ahead of the fixed point, and so primary motion will direct the active point toward the fixed point.

The active and fixed points each have a **semi-arc** that extends backward house-wise from one quadrant boundary to the other. The semi-arc of the active point is the path that it follows as the active sphere undergoes primary motion. The semi-arc of the fixed point is the path that it would follow if the fixed sphere were allowed to undergo primary motion. Note that points *A* and *F* usually have different semi-arcs. Therefore, whenever we say that point *A* will move toward point

F , we mean that point A will move along its own semi-arc and get closer to point F (which lies in its own semi-arc).

The angular length of a point's semi-arc is a non-negative quantity that depends on the point's declination δ and on the chart's geographical latitude Φ via the **ascensional difference**

$$AD = \arcsin(\tan \delta \times \tan \Phi) .$$

If the point lies in a quadrant of the chart's diurnal hemisphere, then it is part of a **diurnal semi-arc**. If the point lies in a quadrant of the chart's nocturnal hemisphere, then it is part of a **nocturnal semi-arc**. The angular length of a semi-arc is given by

$$SA = \begin{cases} 90^\circ + AD & \text{for a diurnal semi-arc} \\ 90^\circ - AD & \text{for a nocturnal semi-arc} . \end{cases}$$

Because AD is an arcsine value, its range is from -90° to $+90^\circ$. It follows that SA can never be negative.

Each semi-arc extends backward house-wise from one quadrant boundary to the other. If the beginning quadrant boundary is the eastern or western portion of the horizon, then each point lies along its own semi-arc at some angular distance HD away from the horizon. This **horizontal distance** is given by

$$HD = \begin{cases} (OA)_{Asc} - OA & \text{in the upper eastern sky} \\ (OD)_{Dsc} - OD & \text{in the lower western sky} , \end{cases}$$

where $OA = RA - AD$ is the **oblique ascension** and $OD = RA + AD$ is the **oblique descension**. Like right ascension RA , oblique ascension and oblique descension are increasing functions of ecliptic longitude. Because points A and F both lie zodiacally behind the horizon, their respective horizontal distances are nonnegative angular quantities.

If the beginning quadrant boundary is the upper or lower portion of the meridian, then each point lies along its own semi-arc at some angular distance MD away from the meridian. This **meridian distance** is given by

$$MD = \begin{cases} (RA)_{MC} - RA & \text{in the upper western sky} \\ (RA)_{IC} - RA & \text{in the lower eastern sky} . \end{cases}$$

Right ascension RA is an increasing function of ecliptic longitude. Because points A and F both lie zodiacally behind the meridian, their respective meridian distances are nonnegative angular quantities.

Let r be the point's **proportional location**, which is ratio of the point's angular distance (whether HD or MD) divided by its semi-arc's angular length SA . Note that r takes on values from 0 to 1. For the time of the chart, the active point lies zodiacally ahead of the fixed point, and so its proportional location is lesser. That is, we have $r_A < r_F$. As primary motion occurs, the active-point's proportional location increases. A **conjunction** occurs between points A and F whenever their proportional locations become equal. The arc of direction is the angle through which the active point must be moved (via primary motion) along its own semi-arc so that its proportional location goes from the chart value r_A to the conjunction value r_F . More specifically, we have

$$\text{arc of direction} = (r_F - r_A) \times (SA)_A$$

for a primary direction in the quadrant of interest. We will refer to this expression as the **proportional semi-arc formula**.

1.4 Directing in the lower eastern sky

[\[Back to TOC\]](#)

In a suitable astrological chart, consider an active-sphere point A and a fixed-sphere point F that lie in the lower eastern sky (that is, the quadrant consisting of the 1st, 2nd, and 3rd Houses). The active point lies zodiacally ahead of the fixed point, and so primary motion will direct the active point toward the fixed point.

The active and fixed points each have a nocturnal semi-arc that extends from the lower meridian (which contains the Imum Coeli) to the eastern horizon (which contains the Ascendant). Each point's angular distance along its own nocturnal semi-arc is given by the its meridian distance MD from the lower meridian. The positive ratios

$$r_A = \frac{(MD)_A}{(SA)_A} = \frac{(RA)_{IC} - (RA)_A}{90^\circ - (AD)_A}, \quad r_F = \frac{(MD)_F}{(SA)_F} = \frac{(RA)_{IC} - (RA)_F}{90^\circ - (AD)_F}$$

respectively give each point's proportional location along its own nocturnal semi-arc.

Let's now consider the special case of the fixed point being the Ascendant. Because the Ascendant lies at the end of its own semi-arc, we have

$$\begin{aligned} 1 = r_{Asc} &= \frac{(RA)_{IC} - (RA)_{Asc}}{90^\circ - (AD)_{Asc}} \Rightarrow (RA)_{IC} - (RA)_{Asc} = 90^\circ - (AD)_{Asc} \\ &\Rightarrow (RA)_{IC} = (OA)_{Asc} + 90^\circ. \end{aligned}$$

From Section 1.3, the proportional semi-arc formula yields the expression

$$\begin{aligned} \text{arc of direction} &= (r_{Asc} - r_A) \times (SA)_A = \left[1 - \frac{(RA)_{IC} - (RA)_A}{90^\circ - (AD)_A} \right] \times [90^\circ - (AD)_A] \\ &= \left\{ \frac{[90^\circ - (AD)_A] - [(OA)_{Asc} + 90^\circ] + (RA)_A}{90^\circ - (AD)_A} \right\} \times [90^\circ - (AD)_A] \\ &= 90^\circ - (AD)_A - (OA)_{Asc} - 90^\circ + (RA)_A = [(RA)_A - (AD)_A] - (OA)_{Asc}, \end{aligned}$$

and so

$$\text{arc of direction} = (OA)_A - (OA)_{Asc}$$

for a primary direction having the Ascendant as the fixed point.

1.5 Directing in the upper western sky

[\[Back to TOC\]](#)

In a suitable astrological chart, consider an active-sphere point A and a fixed-sphere point F that lie in the upper western sky (that is, the quadrant consisting of the 7th, 8th, and 9th Houses). The active point lies zodiacally ahead of the fixed point, and so primary motion will direct the active point toward the fixed point.

The active and fixed points each have a diurnal semi-arc that extends from the upper meridian (which contains the Midheaven) to the lower horizon (which contains the Descendant). Each point's angular distance along its own diurnal semi-arc is given by its meridian distance MD from the upper meridian. The positive ratios

$$r_A = \frac{(MD)_A}{(SA)_A} = \frac{(RA)_{MC} - (RA)_A}{90^\circ + (AD)_A}, \quad r_F = \frac{(MD)_F}{(SA)_F} = \frac{(RA)_{MC} - (RA)_F}{90^\circ + (AD)_F}$$

respectively give each point's proportional location along its own diurnal semi-arc.

Let's now consider the special case of the fixed point being the Descendant. Because the Descendant lies at the far endpoint of its own semi-arc, we have

$$\begin{aligned} 1 = r_{Dsc} &= \frac{(RA)_{MC} - (RA)_{Dsc}}{90^\circ + (AD)_{Dsc}} \Rightarrow (RA)_{MC} - (RA)_{Dsc} = 90^\circ + (AD)_{Dsc} \\ &\Rightarrow (RA)_{MC} = (OD)_{Dsc} + 90^\circ. \end{aligned}$$

From Section 1.3, the proportional semi-arc formula yields the expression

$$\begin{aligned} \text{arc of direction} &= (r_{Dsc} - r_A) \times (SA)_A = \left[1 - \frac{(RA)_{MC} - (RA)_A}{90^\circ + (AD)_A} \right] \times [90^\circ + (AD)_A] \\ &= \left\{ \frac{[90^\circ + (AD)_A] - [(OD)_{Dsc} + 90^\circ] + (RA)_A}{90^\circ + (AD)_A} \right\} \times [90^\circ + (AD)_A] \\ &= 90^\circ + (AD)_A - (OD)_{Dsc} - 90^\circ + (RA)_A = [(RA)_A + (AD)_A] - (OD)_{Dsc}, \end{aligned}$$

and so

$$\text{arc of direction} = (OD)_A - (OD)_{Dsc}$$

for a primary direction having the Descendant as the fixed point.

1.6 Directing in the upper eastern sky

[\[Back to TOC\]](#)

In a suitable astrological chart, consider an active-sphere point A and a fixed-sphere point F that lie in the upper eastern sky (that is, the quadrant consisting of the 10th, 11th, and 12th Houses). The active point lies zodiacally ahead of the fixed point, and so primary motion will direct the active point toward the fixed point.

The active and fixed points each have a diurnal semi-arc that extends from the eastern horizon (which contains the Ascendant) to the upper meridian (which contains the Midheaven). Each point's angular distance along its own diurnal semi-arc is given by its horizontal distance HD from the eastern horizon. The positive ratios

$$r_A = \frac{(HD)_A}{(SA)_A} = \frac{(OA)_{Asc} - (OA)_A}{90^\circ + (AD)_A}, \quad r_F = \frac{(HD)_F}{(SA)_F} = \frac{(OA)_{Asc} - (OA)_F}{90^\circ + (AD)_F}$$

respectively give each point's proportional location along its own diurnal semi-arc.

Let's now consider the special case of the fixed point being the Midheaven. Because the Midheaven lies at the far endpoint of its own semi-arc, we have

$$\begin{aligned} 1 = r_{MC} &= -\frac{(OA)_{MC} - (OA)_{Asc}}{90^\circ + (AD)_{MC}} \Rightarrow (OA)_{MC} - (OA)_{Asc} = -(AD)_{MC} - 90^\circ \\ &\Rightarrow (OA)_{Asc} = (RA)_{MC} + 90^\circ. \end{aligned}$$

From Section 1.3, the proportional semi-arc formula yields the expression

$$\begin{aligned} \text{arc of direction} &= (r_{MC} - r_A) \times (SA)_A = \left[1 - \frac{(OA)_{Asc} - (OA)_A}{90^\circ + (AD)_A} \right] \times [90^\circ + (AD)_A] \\ &= \left\{ \frac{[90^\circ + (AD)_A] - [(RA)_{MC} + 90^\circ] + (OA)_A}{90^\circ + (AD)_A} \right\} \times [90^\circ + (AD)_A] \\ &= 90^\circ - (RA)_{MC} - 90^\circ + (AD)_A + (OA)_A = [(OA)_A + (AD)_A] - (RA)_{MC}, \end{aligned}$$

and so

$$\text{arc of direction} = (RA)_A - (RA)_{MC}$$

for a primary direction having the Midheaven as the fixed point.

1.7 Directing in the lower western sky

[\[Back to TOC\]](#)

In a suitable astrological chart, consider an active-sphere point A and a fixed-sphere point F that lie in the lower western sky (that is, the quadrant consisting of the 4th, 5th, and 6th Houses). The active point lies zodiacally ahead of the fixed point, and so primary motion will direct the active point toward the fixed point.

The active and fixed points each have a nocturnal semi-arc that extends from the lower horizon (which contains the Descendant) to the lower meridian (which contains the Imum Coeli). Each point's angular distance along its own nocturnal semi-arc is given by its horizontal distance HD from the lower horizon. The positive ratios

$$r_A = \frac{(HD)_A}{(SA)_A} = \frac{(OD)_{Dsc} - (OD)_A}{90^\circ - (AD)_A}, \quad r_F = \frac{(HD)_F}{(SA)_F} = \frac{(OD)_{Dsc} - (OD)_F}{90^\circ - (AD)_F}$$

respectively give each point's proportional location along its own nocturnal semi-arc.

Let's now consider the special case of the fixed point being the Imum Coeli. Because the Imum Coeli lies at the far endpoint of its own semi-arc, we have

$$\begin{aligned} 1 = r_{IC} &= -\frac{(OD)_{IC} - (OD)_{Dsc}}{90^\circ - (AD)_{IC}} \Rightarrow (OD)_{IC} - (OD)_{Dsc} = (AD)_{IC} - 90^\circ \\ &\Rightarrow (OD)_{Dsc} = (RA)_{IC} + 90^\circ. \end{aligned}$$

From Section 1.3, the proportional semi-arc formula yields the expression

$$\begin{aligned} \text{arc of direction} &= (r_{IC} - r_A) \times (SA)_A = \left[1 - \frac{(OD)_{Dsc} - (OD)_A}{90^\circ - (AD)_A} \right] \times [90^\circ - (AD)_A] \\ &= \left\{ \frac{[90^\circ - (AD)_A] - [(RA)_{IC} + 90^\circ] + (OD)_A}{90^\circ - (AD)_A} \right\} \times [90^\circ - (AD)_A] \\ &= 90^\circ - (AD)_A - (RA)_{IC} - 90^\circ + (OD)_A = [(OD)_A - (AD)_A] - (RA)_{IC}, \end{aligned}$$

and so

$$\text{arc of direction} = (RA)_A - (RA)_{IC}$$

for a primary direction having the Imum Coeli as the fixed point.

1.8 The Ptolemy and Naibod time-keys

[\[Back to TOC\]](#)

A primary direction is associated with a predicted event, and the angular length of the associated arc of direction is related to the time when the event is predicted to occur. In order to convert the angular length into the prediction time, we need a time-key. The Ptolemy and Naibod time-keys are useful when applying the method of primary directions to a natal chart.

Let's become familiar with some basics of time measurement. The **second** is the basic unit of time measurement. One **minute** is 60 seconds, and one **hour** is 60 minutes. A **sidereal day** is the time taken by Earth to complete a single rotation relative to the fixed stars, and it consists of approximately 23 hours, 56 minutes, and 4.0905 seconds (which is about 1436.068175 minutes). A sidereal day is a few minutes short of a **mean solar day**, which is the time taken by Earth to complete a single rotation and to advance about one degree along its orbital path about Sun. A mean solar day is exactly 24 hours, and it is the basis of the 24-hour civil day.

A **sidereal year** is the time taken by Earth to complete its orbit about Sun relative to the fixed stars, and it consists of 365 mean solar days, 6 hours, 9 minutes, and 9.8 seconds (which is about 365.256363 mean solar days). A **mean tropical year** is the time taken by Earth to complete its annual cycle of seasons, and it consists of 365 mean solar days, 5 hours, 48 minutes, and 45.1 seconds (which is about 365.242189 mean solar days).

THE PTOLEMY TIME-KEY

Earth's axial rotation gives rise to primary motion. Earth takes one sidereal day (about 1436.068175 minutes) to rotate by 360° about its axis. As Earth makes its daily axial rotation, it rotates at an angular rate of about

$$\frac{360 \text{ deg}}{1436.068175 \text{ min}} \approx \frac{1 \text{ deg}}{3.98907826 \text{ min}},$$

and so it takes Earth about 3.98907826 minutes to longitudinally rotate by 01°. The **Ptolemy time-key** (named after the Hellenistic astrologer Claudius Ptolemy) is the notion that one degree of Earth's axial rotation corresponds to one tropical year of age. Therefore, according to the Ptolemy time-key, each degree of the arc of direction corresponds to one tropical year of age. Moreover, every addition of about 3.98907826 minutes to the birth time symbolically advances the natal chart by one tropical year of age.

THE NAIBOD TIME-KEY

From the point of view of an earthbound observer, Earth takes one mean tropical year (about 365.242189 mean solar days) to revolve by 360° about Sun. As Earth makes its yearly orbit, it moves at an angular rate of

$$\frac{360 \text{ deg}}{365.242189 \text{ days}} \approx \frac{0.985647362 \text{ deg}}{1 \text{ day}} \approx \frac{00^\circ 59' 08.33050''}{1 \text{ day}}.$$

We may view Earth's yearly 360° orbit as a sequence of nearly 365.242189 steps, each step being about 0.985647362 *deg*.

Earth's axial rotation gives rise to primary motion. Let's liken Earth's daily axial rotation to its yearly orbital motion about Sun. More specifically, let's view Earth's daily 360° axial rotation as a sequence of nearly 365.242189 steps, each step being about 0.985647362 *deg*. The **Naibod time-key** (named after the 16th-century German astrologer Valentine Naibod) is the notion that 0.985647362 *deg* (or 00° 59' 08.33050'') of Earth's axial rotation corresponds to one tropical year of age. Therefore, according to the Naibod time-key, each 0.985647362 *deg* of the arc of direction corresponds to one tropical year of age. In this regard, we find that

$$\frac{1 \text{ yr of age}}{0.985647362 \text{ deg}} \approx \frac{1.01456164 \text{ yrs of age}}{1 \text{ deg}},$$

and so each degree of the arc of direction corresponds to about 1.01456164 tropical years of age.

It takes Earth about 3.98907826 minutes to longitudinally rotate by 01°, and so

$$0.985647362 \text{ deg} \times \frac{3.98907826 \text{ min}}{1 \text{ deg}} \approx 3.93182446 \text{ min}$$

is the time taken by Earth to longitudinally rotate by about 0.985647362 *deg* (or 00° 59' 08.33050''). Therefore, according to the Naibod time-key, every addition of about 3.93182446 minutes to the birth time symbolically advances the natal chart by one tropical year of age.

VISUALIZING PRIMARY DIRECTIONS

Regarding the Ptolemy and Naibod time-keys, we see that the native's life at A tropical years of age is revealed by what is happening astrologically when they are about $(4 \times A)$ minutes old. For example, the native's life at age 90 is revealed by an astrological chart that is cast for when the native is about 360 minutes old.

TABLE 1.8: Average longitudinal angular speeds

Planet	Angular Speed
Saturn	00° 02' 01" per day
Jupiter	00° 04' 59" per day
Mars	00° 31' 27" per day
Sun	00° 59' 08" per day
Venus	01° 12' 00" per day
Mercury	01° 23' 00" per day
Moon	13° 10' 35" per day

If we take age 90 to be the human life span, then we can examine the native's entire life based on what is happening astrologically during the first 360 minutes (or 6 hours) after their birth. TABLE 1.8 presents the average longitudinal angular speed of each classical planet as it undergoes **secondary motion** (that is, apparent movement along the zodiac) along the celestial sphere. From this table, we see that each planet (apart from Moon) does not move very much along the zodiac during a 6-hour time period, and so we may ignore secondary motion and view primary motion as causing the zodiacal belt (with the planets attached to it) to rotate backward through fixed houses of the local sky. During the 6-hour time period after birth, primary motion directs the planets into major aspects with the angles (that is, the Ascendant, the Descendant, the Midheaven, and the Imum Coeli). These major planet-to-angle aspects correspond to primary directions.

Here is a fast and easy method for visualizing the most important natal primary directions:

Technique #PD1: In order to examine the native's life around A tropical years of age, cast symbolic charts for about $(3.93182446 \times A)$ minutes before and after the birth time. In these symbolic charts, look for major planet-to-angle aspects, taking the margin of inexactness to be about 01° . These major aspects correspond to primary directions that each predict an event to occur in the native's life around A tropical years of age.

The primary directions that are shown in the pre-birth symbolic chart are neo-converse. The primary directions that are shown in the post-birth symbolic chart are direct. The essence of this fast and easy method is presented by astrologer Anthony Louis in his blog post *Fast and Easy Primary Directions* (20 July 2019).

1.9 The SR and LR time-keys

[\[Back to TOC\]](#)

Let's now consider applying the method of primary directions to a solar-return (SR) chart. Primary motion is related to Earth's axial rotation, which has a time rate of

$$\frac{360 \text{ deg}}{1436.068175 \text{ min}} \approx \frac{1 \text{ deg}}{3.98907826 \text{ min}}.$$

Solar returns are related to Earth's orbital motion about Sun, which has a time rate of

$$\frac{360 \text{ deg}}{365.242189 \text{ days}} \approx \frac{1 \text{ deg}}{1.01456164 \text{ days}}.$$

The **SR time-key** is the notion that one degree of Earth's axial rotation corresponds to one degree of Earth's orbital motion. Therefore, according to the SR time-key, each degree of the arc of direction corresponds to about 1.01456164 mean solar days of age. Moreover, every addition of about 3.98907826 minutes to the SR time symbolically advances the SR chart by about 1.01456164 mean solar days of age. It follows that every addition of about 3.93182446 minutes to the SR time symbolically advances the SR chart by one mean solar day of age.

Here is a fast and easy method for visualizing the most important SR primary directions:

Technique #PD2: In order to examine the native's life around D mean solar days after the SR date, cast symbolic charts for about $(3.93182446 \times D)$ minutes before and after the SR time. In these symbolic charts, look for major planet-to-angle aspects, taking the margin of inexactness to be about 01° . These major aspects correspond to primary directions that each predict an event to occur in the native's life around D days after the SR date.

The primary directions that are shown in the pre-SR symbolic chart are neo-converse. The primary directions that are shown in the post-SR symbolic chart are direct.

Let's now consider applying the method of primary directions to a lunar-return (LR) chart. Primary motion is related to Earth's axial rotation, which has a time rate of

$$\frac{360 \text{ deg}}{1436.068175 \text{ min}} \approx \frac{1 \text{ deg}}{3.98907826 \text{ min}}.$$

Lunar returns are related to Moon's orbital motion about Earth, which has a time rate of

$$\frac{360 \text{ deg}}{27.3215822 \text{ days}} \approx \frac{1 \text{ deg}}{0.0758932839 \text{ day}}.$$

Note that a **tropical month** consists of 27 mean solar days, 7 hours, 43 minutes, and 4.7 seconds (which is about 27.3215822 mean solar days). The **LR time-key** is the notion that each degree of Earth's axial rotation corresponds to each degree of Moon's orbital motion. Therefore, according to the LR time-key, each degree of the arc of direction corresponds to about 0.0758932839 mean solar days of age. Moreover, every addition of about 3.98907826 minutes to the LR time symbolically advances the LR chart by 0.0758932839 mean solar days of age. It follows that every

addition of about 52.5616768 minutes to the LR time symbolically advances the LR chart by one mean solar day of age.

Here is a fast and easy method for visualizing the most important LR primary directions:

Technique #PD3: In order to examine the native's life around D mean solar days after the LR date, cast symbolic charts for about $(52.5616768 \times D)$ minutes before and after the LR time. In these symbolic charts, look for major planet-to-angle aspects, taking the margin of inexactness to be about 01° . These major aspects correspond to primary directions that each predict an event to occur in the native's life around D days after the LR date.

The primary directions that are shown in the pre-LR symbolic chart are neo-converse. The primary directions that are shown in the post-LR symbolic chart are direct.

2. THE GENERAL FORMULA

2.1 The primary-direction formula

[\[Back to TOC\]](#)

In Section 1.3, we presented the proportional semi-arc formula, which involves a situation in which the active and fixed points of a primary direction both lie in the same quadrant of the sky. In this section, we present a formula that can be applied to any situation of primary directions.

In applying the method of primary directions, we are working with an astrological chart that is cast for a specific time of interest, which could be a birth time, a solar-return time, or a lunar-return time. For the time of the chart, consider an active-sphere point A and a fixed-sphere point F . The arc of direction is the circular path along which primary motion directs the active point toward the fixed point. For primary directions that are direct or traditionally converse, the angular length of the arc of direction is given by the **primary-direction formula**

$$\text{arc of direction} = \begin{cases} (RA)_A - (RA)_F - R_F \times [(AD)_A - (AD)_F] & \text{for an eastern fixed point} \\ (RA)_A - (RA)_F + R_F \times [(AD)_A - (AD)_F] & \text{for a western fixed point} . \end{cases}$$

For each of the points A and F , the ascensional difference is given by

$$AD = \arcsin(\tan \delta \times \tan \Phi) ,$$

where RA is the point's declination, δ is the point's declination, and Φ is the chart's geographical latitude. The nonnegative quantity

$$R_F = \left| \frac{(MD)_F}{(SA)_F} \right|$$

involves the ratio of the fixed-point's meridian distance

$$(MD)_F = \begin{cases} (RA)_{MC} - (RA)_F & \text{for a fixed point in the upper sky} \\ (RA)_{IC} - (RA)_F & \text{for a fixed point in the lower sky} \end{cases}$$

to its semi-arc

$$(SA)_F = \begin{cases} 90^\circ + (AD)_F & \text{for a fixed point in the upper sky} \\ 90^\circ - (AD)_F & \text{for a fixed point in the lower sky} . \end{cases}$$

Note that R_F must not exceed the value of 1.

2.2 Directing toward the Ascendant

[\[Back to TOC\]](#)

For a primary direction having the Ascendant as the fixed point, the primary-direction formula yields

$$\text{arc of direction} = (RA)_A - (RA)_{Asc} - R_{Asc} \times [(AD)_A - (AD)_{Asc}] .$$

The Ascendant is on the horizon, but the expression for R_F depends on whether the fixed point is above or below the horizon. In order to solve this problem, we will firstly take the Ascendant to be slightly away from the horizon and secondly take the mathematical limit as ‘being slightly away the horizon’ approaches ‘being on the horizon’.

Let’s take the Ascendant to be slightly above the horizon. In this what-if scenario, we have

$$R_{Asc} = \left| \frac{(RA)_{MC} - (RA)_{Asc}}{90^\circ + (AD)_{Asc}} \right|.$$

On making use of the expression

$$(OA)_{Asc} = (RA)_{MC} + 90^\circ,$$

we get

$$\begin{aligned} \frac{(RA)_{MC} - (RA)_{Asc}}{90^\circ + (AD)_{Asc}} &= \frac{[(OA)_{Asc} - 90^\circ] - (RA)_{Asc}}{90^\circ + (AD)_{Asc}} = \frac{-90^\circ + [(OA)_{Asc} - (RA)_{Asc}]}{90^\circ + (AD)_{Asc}} \\ &= \frac{-90^\circ - (AD)_{Asc}}{90^\circ + (AD)_{Asc}} = \frac{-[90^\circ + (AD)_{Asc}]}{90^\circ + (AD)_{Asc}} = -1. \end{aligned}$$

Therefore, we get $R_{Asc} = |-1| = 1$ for the what-if scenario of the Ascendant being slightly above the horizon. On taking the mathematical limit as ‘being slightly above the horizon’ approaches ‘being on the horizon’, we get $R_{Asc} = 1$.

Let’s now take the Ascendant to be slightly below the horizon. In this what-if scenario, we have

$$R_{Asc} = \left| \frac{(RA)_{IC} - (RA)_{Asc}}{90^\circ - (AD)_{Asc}} \right|.$$

If Point #1 and Point #2 are opposite points of the celestial sphere, then

$$\begin{aligned} (RA)_2 &= (RA)_1 - 180^\circ \equiv (RA)_1 + 180^\circ, \\ \delta_2 &= -\delta_1 \Rightarrow (AD)_2 = -(AD)_1. \end{aligned}$$

Note that the mathematical symbol ‘ $\equiv$ ’ means ‘is equivalent to’. Two angles are equivalent if they differ by some nonzero integer multiple of 360° . Because the Midheaven and Imum Coeli are opposite points of the celestial sphere, we get

$$(RA)_{IC} = (RA)_{MC} - 180^\circ \equiv (RA)_{MC} + 180^\circ,$$

and so

$$\begin{aligned} \frac{(RA)_{IC} - (RA)_{Asc}}{90^\circ - (AD)_{Asc}} &= \frac{[(RA)_{MC} + 180^\circ] - (RA)_{Asc}}{90^\circ - (AD)_{Asc}} \\ &= \frac{[(OA)_{Asc} - 90^\circ] + 180^\circ - (RA)_{Asc}}{90^\circ - (AD)_{Asc}} = \frac{90^\circ + [(OA)_{Asc} - (RA)_{Asc}]}{90^\circ - (AD)_{Asc}} \\ &= \frac{90^\circ - (AD)_{Asc}}{90^\circ - (AD)_{Asc}} = 1. \end{aligned}$$

Therefore, we get $R_{Asc} = |1| = 1$ for the what-if scenario of the Ascendant being slightly below the horizon. On taking the mathematical limit as ‘being slightly below the horizon’ approaches ‘being on the horizon’, we get $R_{Asc} = 1$.

For the two what-if scenarios just considered, the pertinent mathematical limits are equal. Therefore, we have $R_{Asc} = 1$ for the Ascendant being on the horizon. It follows that

$$\begin{aligned} \text{arc of direction} &= (RA)_A - (RA)_{Asc} - 1 \times [(AD)_A - (AD)_{Asc}] \\ &= [(RA)_A - (AD)_A] - [(RA)_{Asc} - (AD)_{Asc}] , \end{aligned}$$

and so

$$\text{arc of direction} = (OA)_A - (OA)_{Asc}$$

for a primary direction having the Ascendant as the fixed point. Note that $OA = RA - AD$ is the oblique ascension.

2.3 Directing toward the Descendant

[\[Back to TOC\]](#)

For a primary direction having the Descendant as the fixed point, the primary-direction formula yields

$$\text{arc of direction} = (RA)_A - (RA)_{Dsc} + R_{Dsc} \times [(AD)_A - (AD)_{Dsc}] .$$

The Descendant is on the horizon, but the expression for R_F depends on whether the fixed significator is above or below the horizon. In order to solve this problem, we will firstly take the Descendant to be slightly away from the horizon and secondly take the mathematical limit as ‘being slightly away the horizon’ approaches ‘being on the horizon’.

Let’s take the Descendant to be slightly above the horizon. In this what-if scenario, we have

$$R_{Dsc} = \left| \frac{(RA)_{MC} - (RA)_{Dsc}}{90^\circ + (AD)_{Dsc}} \right| .$$

On making use of the expression

$$(OD)_{Dsc} = (RA)_{MC} - 90^\circ ,$$

we get

$$\begin{aligned} \frac{(RA)_{MC} - (RA)_{Dsc}}{90^\circ + (AD)_{Dsc}} &= \frac{[(OD)_{Dsc} + 90^\circ] - (RA)_{Dsc}}{90^\circ + (AD)_{Dsc}} = \frac{90^\circ + [(OD)_{Dsc} - (RA)_{Dsc}]}{90^\circ + (AD)_{Dsc}} \\ &= \frac{90^\circ + (AD)_{Dsc}}{90^\circ + (AD)_{Dsc}} = 1 , \end{aligned}$$

and so $R_{Dsc} = |1| = 1$ for the what-if scenario of the Descendant being slightly above the horizon. On taking the mathematical limit as ‘being slightly above the horizon’ approaches ‘being on the horizon’, we get $R_{Dsc} = 1$.

Let's now take the Descendant to be slightly below the horizon. In this what-if scenario, we have

$$R_{Dsc} = \left| \frac{(RA)_{IC} - (RA)_{Dsc}}{90^\circ - (AD)_{Dsc}} \right|.$$

Because the Midheaven and Imum Coeli are opposite points of the celestial sphere, we have

$$\begin{aligned} (RA)_{IC} &= (RA)_{MC} - 180^\circ \equiv (RA)_{MC} + 180^\circ, \\ \delta_{IC} &= -\delta_{MC} \Rightarrow (AD)_{IC} = -(AD)_{MC}. \end{aligned}$$

We find that

$$\frac{(RA)_{IC} - (RA)_{Dsc}}{90^\circ - (AD)_{Dsc}} = \frac{[(RA)_{MC} - 180^\circ] - [(RA)_{Asc} - 180^\circ]}{90^\circ - [-(AD)_{Asc}]} = \frac{(RA)_{MC} - (RA)_{Asc}}{90^\circ + (AD)_{Asc}},$$

which we have already shown to be equal to -1 in Section 3.2. Therefore, we get $R_{Dsc} = |-1| = 1$ for the what-if scenario of the Descendant being slightly below the horizon. On taking the mathematical limit as 'being slightly below the horizon' approaches 'being on the horizon', we get $R_{Dsc} = 1$.

For the two what-if scenarios just considered, the pertinent mathematical limits are equal. Therefore, we have $R_{Dsc} = 1$ for the Descendant being on the horizon. It follows that

$$\begin{aligned} \text{arc of direction} &= (RA)_A - (RA)_{Dsc} + 1 \times [(AD)_A - (AD)_{Dsc}] \\ &= [(RA)_A + (AD)_A] - [(RA)_{Dsc} + (AD)_{Dsc}], \end{aligned}$$

and so

$$\text{arc of direction} = (OD)_A - (OD)_{Dsc}$$

for a primary direction having the Descendant as the fixed point. Note that $OD = RA + AD$ is the oblique descension.

Let's go further. For the point Q that is opposite the active point A , we have

$$(RA)_Q = (RA)_A - 180^\circ \equiv (RA)_A + 180^\circ, \quad (AD)_Q = -(AD)_A,$$

and so

$$\begin{aligned} \text{arc of direction} &= [(RA)_A + (AD)_A] - [(RA)_{Dsc} + (AD)_{Dsc}] \\ &= [(RA)_Q + 180^\circ - (AD)_Q] - [(RA)_{Asc} + 180^\circ - (AD)_{Asc}] \\ &= [(RA)_Q - (AD)_Q] - [(RA)_{Asc} - (AD)_{Asc}]. \end{aligned}$$

It follows that

$$\text{arc of direction} = (OA)_Q - (OA)_{Asc},$$

and so for a primary direction having the Descendant as the fixed point, we may consider the situation in which primary motion directs the point opposite A toward the Ascendant.

2.4 Directing toward a meridian angle

[\[Back to TOC\]](#)

For a primary direction having the Midheaven as the fixed point, the primary-direction formula yields

$$\text{arc of direction} = (RA)_A - (RA)_{MC} \mp R_{MC} \times [(AD)_A - (AD)_{MC}] .$$

Because the Midheaven lies in the upper sky, we have

$$R_{MC} = \left\lfloor \frac{(RA)_{MC} - (RA)_{MC}}{90^\circ + (AD)_{MC}} \right\rfloor = 0 ,$$

and so

$$\text{arc of direction} = (RA)_A - (RA)_{MC}$$

for a primary direction having the Midheaven as the fixed point.

For a primary direction having the Imum Coeli as the fixed point, the primary-direction formula yields

$$\text{arc of direction} = (RA)_A - (RA)_{IC} \mp R_{IC} \times [(AD)_A - (AD)_{IC}] .$$

Because the Imum Coeli lies in the lower sky, we have

$$R_{IC} = \left\lfloor \frac{(RA)_{IC} - (RA)_{IC}}{90^\circ - (AD)_{IC}} \right\rfloor = 0 ,$$

and so

$$\text{arc of direction} = (RA)_A - (RA)_{IC}$$

for a primary direction having the Imum Coeli as the fixed point.

Let's go further. For the point Q that is opposite the active point A , we have

$$(RA)_Q = (RA)_A - 180^\circ \equiv (RA)_A + 180^\circ ,$$

and so

$$\begin{aligned} \text{arc of direction} &= (RA)_A - (RA)_{IC} = [(RA)_A - 180^\circ] - [(RA)_{MC} - 180^\circ] \\ &= (RA)_Q - (RA)_{MC} , \end{aligned}$$

and so for a primary direction having the Imum Coeli as the fixed point, we may consider the situation in which primary motion directs the point opposite A toward the Midheaven.

3. SOME OF MY PRIMARY DIRECTIONS

3.1 Introduction

[\[Back to TOC\]](#)

In this book, we will be using the tropical zodiac, Porphyry houses primarily, and whole-sign houses secondarily. As a quadrant-house system, the **Porphyry house system** uses the horizon and the meridian to divide the sky into four quadrants, each containing three houses. Moreover, the three Porphyry houses within a given quadrant are equal in angular expanse. The **whole-sign house system** is an ecliptic-based house system in which each house is tied to a single sign.

Regarding the Porphyry house system, we will be using the denotation ‘PH n ’ to mean ‘Porphyry House n ’ and the denotation ‘PC n ’ to refer to its cusp. Note that PC1 contains the Ascendant, PC4 contains the Imum Coeli, PC7 contains the Descendant, and PC10 contains the Midheaven. The even-numbered, nonangular house cusps (that is, PC2, PC6, PC8, and PC12) have the same sign degree. Moreover, the odd-numbered, nonangular house cusps (that is, PC3, PC5, PC9, and PC11) have the same sign degree.

Regarding the whole-sign house system, we will be using the denotation ‘WS n ’ to mean ‘whole-sign House n ’. In the whole-sign house system, WS1 is tied to the **rising sign** (that is, the sign of the Ascendant), WS7 is tied to the sign of the Descendant, but WS10 and WS4 are not always tied respectively to the signs of the Midheaven and the Imum Coeli.

3.2 The direct Jupiter-PC10 square: calculation

[\[Back to TOC\]](#)

FIGURE 3.2 presents my natal chart. With regard to this chart, the Jupiter-PC10 square corresponds to a direct primary direction in which Jupiter’s dexter-square copy (JDSC) is the active promissor and the Midheaven (in PC10) is the fixed significator. Both JDSC and the Midheaven lie in the upper eastern sky. From Section 1.6, we find that

$$\text{arc of direction} = (RA)_P - (RA)_{MC} ,$$

where the subscript P refers to the promissor.

Firstly, let’s calculate the pertinent obliquity value. Between my birth time (Tuesday, 08 March 1955 at 11:15 CST, or 17:15 UTC) and the epoch J2000.0 (Saturday, 01 January 2000 at approximately 12:00 UTC), the elapsed time in Julian years is approximately

$$\frac{[(11 \times 366) + (34 \times 365) - (30 + 28 + 8 + \frac{5.25}{24})] \text{ days}}{365.25 \text{ days/yr}} \approx 44.8180185 \text{ yrs} ,$$

and so the signed number of Julian centuries since the epoch J2000.0 is

$$T \approx -\frac{44.8180185 \text{ yrs}}{100 \text{ yrs}} = -0.448180185.$$

On making use of the obliquity formula in Section 1.1, we get

$$\begin{aligned}\varepsilon &\approx 23^\circ 26' 21.406'' - 46.836769'' \times (-0.448180185) \\ &\approx 23^\circ 26' 21.406'' + 20.9913118'' = 23^\circ 26' 42.3973118'' \approx 23.44511^\circ.\end{aligned}$$

Note that T is positive for dates after the epoch and negative for dates before the epoch.

FIGURE 3.2: My natal chart

Ma 07:11 (PC12) 21:22	(PC11) 13:08 JDSC 19:53	(PC10) 04:53 Su 17:21	Ve 04:28 (PC9) 13:08 Me 20:02	(PC8) 21:22
WS12 TA	WS11 AR	WS10 PI	WS9 AQ	WS8 CP
(PC1) 29:37	Aakhut Em Bak Natal Chart (Tropical Zodiac) Tuesday, 08 MAR 1955 at 11:15 CST Chicago, IL (41° 51' N; 87° 39' W)			(PC7) 29:37
WS1 GE				WS7 SA
Ju 19:59 R (PC2) 21:22	(PC3) 13:08	(PC4) 04:53 Mo 18:08	(PC5) 13:08	Sa 21:07 R (PC6) 21:22
WS2 CN	WS3 LE	WS4 VI	WS5 LI	WS6 SC

Secondly, let's use pertinent formulas of Section 1.1 to deal with Jupiter's dexter-square copy (JDSC). In the natal chart (FIGURE 3.2), Jupiter is at Cancer $19^\circ 59' 17''$ with an ecliptic latitude of $+00^\circ 28' 59''$. JDSC is at Aries $19^\circ 59' 17''$ with a Bianchini ecliptic latitude of $(+00^\circ 28' 59'') \times \cos 90^\circ = 0^\circ$. Therefore, we have

$$\lambda_p = 0^\circ + 19^\circ 59' 17'' = 19^\circ 59' 17'' \approx 19.98806^\circ, \quad \beta_p = 0^\circ.$$

We find that JDSC's declination is

$$\begin{aligned}\delta_p &= \arcsin(\sin \varepsilon \times \cos \beta_p \times \sin \lambda_p + \cos \varepsilon \times \sin \beta_p) \\ &\approx \arcsin(\sin 23.44511^\circ \times \cos 0^\circ \times \sin 19.98806^\circ + \cos 23.44511^\circ \times \sin 0^\circ) \\ &\approx +7.81655^\circ.\end{aligned}$$

The equinoctial distance here is

$$\begin{aligned}(ED)_p &= \arccos\left(\frac{\cos \beta_p \times \cos \lambda_p}{\cos \delta_p}\right) \approx \arccos\left[\frac{\cos 0^\circ \times \cos 19.98806^\circ}{\cos(+7.81655^\circ)}\right] \\ &\approx 18.45411^\circ.\end{aligned}$$

Because $\lambda_P < 180^\circ$, we get $(RA)_P = (ED)_P \approx 18.45411^\circ$ as JDSC's right ascension.

Thirdly, let's use pertinent formulas of Section 1.1 to deal with the Midheaven. In the natal chart (FIGURE 3.2), the Midheaven is at Pisces $04^\circ 53' 20''$ with an ecliptic latitude of 0° exactly. Therefore, we have

$$\lambda_{MC} = 330^\circ + 04^\circ 53' 20'' = 334^\circ 53' 20'' \approx 334.88889^\circ, \quad \beta_{MC} = 0^\circ.$$

We find that the Midheaven's declination is

$$\begin{aligned} \delta_{MC} &= \arcsin(\sin \varepsilon \times \cos \beta_{MC} \times \sin \lambda_{MC} + \cos \varepsilon \times \sin \beta_{MC}) \\ &\approx \arcsin(\sin 23.44511^\circ \times \cos 0^\circ \times \sin 334.88889^\circ + \cos 23.44511^\circ \times \sin 0^\circ) \\ &\approx -9.72074^\circ. \end{aligned}$$

The equinoctial distance here is

$$\begin{aligned} (ED)_{MC} &= \arccos\left(\frac{\cos \beta_{MC} \times \cos \lambda_{MC}}{\cos \delta_{MC}}\right) \approx \arccos\left[\frac{\cos 0^\circ \times \cos 334.88889^\circ}{\cos(-9.72074^\circ)}\right] \\ &\approx 23.26664^\circ. \end{aligned}$$

Because $\lambda_{MC} > 180^\circ$, we get $(RA)_{MC} = 360^\circ - (ED)_{MC} \approx 336.73336^\circ$ as the Midheaven's right ascension.

Now we are ready to deal with the arc of direction for the direct Jupiter-PC10 square. We find that

$$\begin{aligned} \text{arc of direction} &= (RA)_P - (RA)_{MC} \approx 18.45411^\circ - 336.73336^\circ = -318.27925^\circ \\ &\equiv -318.27925^\circ + 360^\circ = 41.72075^\circ. \end{aligned}$$

Note that the mathematical symbol ' $\equiv$ ' means 'is equivalent to'. Two angles are equivalent if they differ by some nonzero integer multiple of 360° . According to the Naibod time-key, this arc indicates

$$\begin{aligned} &41.72075 \text{ deg} \times \frac{1.01456164 \text{ yrs of age}}{1 \text{ deg}} \approx 42.32827 \text{ yrs of age} \\ &= 42 \text{ yrs} + \left(0.32827 \text{ yr} \times \frac{365.242189 \text{ days}}{1 \text{ yr}}\right) \approx 42 \text{ yrs} + 119.89805 \text{ days}, \end{aligned}$$

and so the direct Jupiter-PC10 square predicts an event to occur about 120 days after Saturday, 08 March 1997 (my 42nd birthday), which is on Sunday, 06 July 1997 (Day 187 of 1997).

3.3 The direct Jupiter-PC10 square: visualization

[\[Back to TOC\]](#)

In Section 3.2, we calculated the arc of direction for my natal-related Jupiter-PC10 square, which corresponds to a direct primary direction that predicts an event to occur on Sunday, 06 July 1997. In order to visualize this primary direction, let's apply Technique #PD1 of Section 1.8.

As previously found in Section 3.2, the Jupiter-PC10 square was close to exactness when I was about 42.32823 tropical years of age. On applying Technique #PD1 for $A \approx 42.32823$, we get

$$(3.93182446 \times A) \text{ min} \approx 166.42717 \text{ min} \approx 2 \text{ hr} + 46 \text{ min} + 26 \text{ sec}$$

as the chart-change term. Because the Jupiter-PC10 square is direct, we add the chart-change term to the birth time (Tuesday, 08 March 1955 at 11:15 am, CST), thereby getting 02:01:26 pm, CST on the birth date. FIGURE 3.3 presents the pertinent post-birth symbolic chart, and it provides a visualization of my natal-related Jupiter-PC10 square.

FIGURE 3.3: Post-birth symbolic chart

Ju 19:59 R	(PC12) 29:31	Ma 07:15 (PC11) 24:45	(PC10) 19:59	Su 17:28 (PC9) 24:45
WS12 CN	WS11 GE	WS10 TA	WS9 AR	WS8 PI
(PC1) 04:17 (PC2) 29:31	Aakhut Em Bak (Tropical) Post-Birth Symbolic Chart Tuesday, 08 MAR 1955 at 14:01:26 CST Chicago, IL (41° 51' N; 87° 39' W)			(PC7) 04:17 Ve 04:36 Me 20:08 (PC8) 29:31
WS1 LE				WS7 AQ
Mo 19:38 (PC3) 24:45	(PC4) 19:59	Sa 21:07 R (PC5) 24:45	(PC6) 29:31	
WS2 VI	WS3 LI	WS4 SC	WS5 SA	WS6 CP

Let's interpret my Jupiter-PC10 square with regard to my natal chart and my post-birth symbolic chart. For natal Jupiter (in FIGURE 3.2), we find the following:

[Natal] Jupiter in PH1: Jupiter is the lord of PH7 (partnerships) and PH10 (achieving something significant; gaining prestige), and it is the natural representative of noble-minded action, high social position, religion/spirituality, and science & law among professions. Jupiter lies in the intersection of PH1 (the native's well-being) and Cancer WS2 (supportive persons or things). At her best, feminine Cancer safeguards those who are near and dear. In light of the foregoing, Jupiter refers to me as partnering with others in order to safeguard those who are near and dear.

As a diurnal benefic lying below the horizon, Jupiter is unhappy. Therefore, Jupiter moderately facilitates progress or improvement. PH1 allows 100% quadrant-house strength, and so Jupiter quickly facilitates progress or improvement.

For post-birth Jupiter (in FIGURE 3.3), we find the following:

[Post-birth] Jupiter in PH12: Jupiter is the lord of PH6 (being of service to others) and PH9 (spiritual or professional know-how), and it is the natural representative of noble-minded

action, high social position, religion/spirituality, and science & law among professions. Jupiter lies in the intersection of PH12 and Cancer WS12, both houses referring to trying situations. At her best, feminine Cancer safeguards those who are near and dear. In light of the foregoing, Jupiter refers to me as undergoing trying situations in order to be of spiritual or professional service to others.

As a diurnal benefic lying above the horizon, Jupiter is happy. Therefore, Jupiter greatly facilitates progress or improvement. PH12 allows 25% quadrant-house strength, and so Jupiter facilitates progress or improvement at a very slow pace or not at all.

The Jupiter-PC10 square (in FIGURE 3.3) calls for me to bring my desire to achieve something significant into line with noble-minded efforts.

The prediction date of Sunday, 06 July 1997 (Day 187 of 1997) was about 1.5 months after my spiritual initiation. In May of 1997, I went to Nigeria in order to get initiated into *Ifá*, which is a traditional African system of spiritual cultivation. The prominent day of my initiation period was Thursday, 22 May 1997 (Day 142 of 1997).

3.4 The converse Moon-PC10 conjunction: calculation

[\[Back to TOC\]](#)

FIGURE 3.4 presents my 1997 solar-return (SR) chart. With regard to this chart, the Moon-PC10 conjunction corresponds to a converse primary direction in which Moon is the promissor and the Midheaven (in PC10) is the significator. Both Moon and PC10 lie in the upper western sky.

If we take the Moon-PC10 conjunction to be traditionally converse, then the Midheaven is the active significator and Saturn is the fixed promissor. From Section 1.5, we find that

$$\text{arc of direction} = (r_P - r_{MC}) \times (SA)_{MC}$$

where $(SA)_{MC} = 90^\circ + (AD)_{MC}$ and

$$r_P = \frac{(RA)_{MC} - (RA)_P}{90^\circ + (AD)_P}, \quad r_{MC} = \frac{(RA)_{MC} - (RA)_{MC}}{90^\circ + (AD)_{MC}} = 0.$$

It follows that

$$\text{arc of direction} = [(RA)_{MC} - (RA)_P] \times \frac{90^\circ + (AD)_{MC}}{90^\circ + (AD)_P}.$$

Note that the subscript P refers to the promissor.

If we take the Saturn-PC10 conjunction to be neo-converse, then we look at the what-if situation of reversed primary motion directing an active promissor (Saturn) toward a fixed significator (the Midheaven). In this what-if situation, we use the proportional semi-arc formula of Section 1.3 and then multiply by -1 . We find that

$$\text{arc of direction} = -(r_{MC} - r_P) \times (SA)_P = r_P \times (SA)_P,$$

where $(SA)_P = 90^\circ + (AD)_P$. It follows that

$$\text{arc of direction} = (RA)_{MC} - (RA)_P .$$

Note that the subscript P refers to the promissor.

FIGURE 3.4: My 1997 SR chart

(PC12) 21:39 WS12 CN	(PC11) 19:07 WS11 GE	(PC10) 16:35 WS10 TA	Sa 07:23 (PC9) 19:07 WS9 AR	Mo 01:07 Ve 10:54 Me 13:58 Su 17:21 WS8 PI
(PC1) 24:11 WS1 LE	Aakhut Em Bak Solar-Return Chart for Age 42 (Tropical) Friday, 07 MAR 1997 at 15:44:30 CST Chicago, IL (41° 51' N; 87° 39' W)			Ju 10:17 (PC7) 24:11 WS7 AQ
(PC2) 21:39 WS2 VI	Ma 00:19 R (PC3) 19:07 WS3 LI	(PC4) 16:35 WS4 SC	(PC5) 19:07 WS5 SA	(PC6) 21:39 WS6 CP

Firstly, let's calculate the pertinent obliquity value. Between the SR time (Friday, 07 March 1997 at 15:44:30 CST, or 21:44:30 UTC) and the epoch J2000.0 (Saturday, 01 January 2000 at approximately 12:00 UTC), the elapsed time in Julian years is approximately

$$\frac{[3 \times 365 - (30 + 28 + 7 + \frac{9.75}{24})] \text{ days}}{365.25 \text{ days/yr}} \approx 2.81887406 \text{ yrs} ,$$

and so the signed number of Julian centuries since the epoch J2000.0 is

$$T \approx -\frac{2.81887406 \text{ yrs}}{100 \text{ yrs}} = -0.281887406 .$$

On making use of the obliquity formula in Section 1.1, we get

$$\begin{aligned} \varepsilon &\approx 23^\circ 26' 21.406'' - 46.836769'' \times (-0.281887406) \\ &\approx 23^\circ 26' 21.406'' + 13.2026953'' = 23^\circ 26' 34.6086953'' \approx 23.44295^\circ . \end{aligned}$$

Note that T is positive for dates after the epoch and negative for dates before the epoch.

Secondly, let's use pertinent formulas of Section 1.1 to deal with Moon. In the SR chart (FIGURE 3.4), Moon is at Pisces $01^\circ 07' 58''$ with an ecliptic latitude of $+02^\circ 27' 11''$. Therefore, we have

$$\begin{aligned} \lambda_P &= 330^\circ + 01^\circ 07' 58'' = 331^\circ 07' 58'' \approx 331.13278^\circ , \\ \beta_P &= +02^\circ 27' 11'' \approx +2.45306^\circ . \end{aligned}$$

We find that Moon's declination is

$$\begin{aligned}\delta_P &= \arcsin(\sin \varepsilon \times \cos \beta_P \times \sin \lambda_P + \cos \varepsilon \times \sin \beta_P) \\ &\approx \arcsin[\sin 23.44295^\circ \times \cos(+2.45306^\circ) \times \sin 331.13278^\circ \\ &\quad + \cos 23.44295^\circ \times \sin(+2.45306^\circ)] \\ &\approx -8.77901^\circ.\end{aligned}$$

The equinoctial distance here is

$$\begin{aligned}(ED)_P &= \arccos\left(\frac{\cos \beta_P \times \cos \lambda_P}{\cos \delta_P}\right) \approx \arccos\left[\frac{\cos(+2.45306^\circ) \times \cos 331.13278^\circ}{\cos(-8.77901^\circ)}\right] \\ &\approx 27.71026^\circ.\end{aligned}$$

Because $\lambda_P > 180^\circ$, we get $(RA)_P = 360^\circ - (ED)_P \approx 332.28974^\circ$ as Moon's right ascension. My geographic latitude of birth is $\Phi = 41^\circ 51' N = +41.85^\circ$. We find that

$$\begin{aligned}(AD)_P &= \arcsin(\tan \delta_P \times \tan \Phi) \approx \arcsin[\tan(-8.77901^\circ) \times \tan(+41.85^\circ)] \\ &\approx -7.95075^\circ\end{aligned}$$

is Moon's ascensional difference.

Thirdly, let's use pertinent formulas of Section 1.1 to deal with the Midheaven. In the SR chart (FIGURE 3.4), the Midheaven is at Taurus $16^\circ 35' 07''$ with an ecliptic latitude of 0° exactly. Therefore, we have

$$\lambda_{MC} = 30^\circ + 16^\circ 35' 07'' = 46^\circ 35' 07'' \approx 46.58528^\circ, \quad \beta_{MC} = 0^\circ.$$

We find that the Midheaven's declination is

$$\begin{aligned}\delta_{MC} &= \arcsin(\sin \varepsilon \times \cos \beta_{MC} \times \sin \lambda_{MC} + \cos \varepsilon \times \sin \beta_{MC}) \\ &\approx \arcsin(\sin 23.44295^\circ \times \cos 0^\circ \times \sin 46.58528^\circ + \cos 23.44295^\circ \times \sin 0^\circ) \\ &\approx +16.79733^\circ.\end{aligned}$$

The equinoctial distance here is

$$\begin{aligned}(ED)_{MC} &= \arccos\left(\frac{\cos \beta_{MC} \times \cos \lambda_{MC}}{\cos \delta_{MC}}\right) \approx \arccos\left[\frac{\cos 0^\circ \times \cos 46.58528^\circ}{\cos(+16.79733^\circ)}\right] \\ &\approx 44.11821^\circ.\end{aligned}$$

Because $\lambda_{MC} < 180^\circ$, we get $(RA)_{MC} = (ED)_{MC} \approx 44.11821^\circ$ as the Midheaven's right ascension. My geographic latitude of birth is $\Phi = 41^\circ 51' N = +41.85^\circ$. We find that

$$\begin{aligned}(AD)_{MC} &= \arcsin(\tan \delta_{MC} \times \tan \Phi) \approx \arcsin[\tan(+16.79733^\circ) \times \tan(+41.85^\circ)] \\ &\approx 15.68656^\circ\end{aligned}$$

is the Midheaven's ascensional difference.

Now we are ready to deal with the arc of direction for the converse Moon-PC10 conjunction. Because the Midheaven is zodiacally ahead of Moon, the expression $(RA)_{MC} - (RA)_P$ must be positive. We find that

$$\begin{aligned}(RA)_{MC} - (RA)_P &\approx 44.11821^\circ - 332.28974^\circ = -288.17153^\circ \\ &\equiv -288.17153^\circ + 360^\circ = 71.82847^\circ.\end{aligned}$$

If we take the Moon-PC10 conjunction to be traditionally converse, then

$$\begin{aligned}\text{arc of direction} &= [(RA)_{MC} - (RA)_P] \times \frac{90^\circ + (AD)_{MC}}{90^\circ + (AD)_P} \\ &\approx 71.82847^\circ \times \frac{90^\circ + 15.68656^\circ}{90^\circ + (-7.95075^\circ)} \approx 92.52131^\circ.\end{aligned}$$

According to the SR time-key, this arc indicates

$$92.52131 \text{ deg} \times \frac{1.01456164 \text{ days of age}}{1 \text{ deg}} \approx 93.86857 \text{ days of age}.$$

Therefore, the traditionally converse Moon-PC10 conjunction predicts an event to occur about 94 days after Friday, 07 March 1997 (the SR date), which is on Monday, 09 June 1997 (Day 160 of 1997).

If we take the Moon-PC10 conjunction to be neo-converse, then

$$\text{arc of direction} = (RA)_{MC} - (RA)_P \approx 71.82847^\circ.$$

According to the SR time-key, this arc indicates

$$71.82847 \text{ deg} \times \frac{1.01456164 \text{ days of age}}{1 \text{ deg}} \approx 72.87441 \text{ days of age}.$$

Therefore, the neo-converse Moon-PC10 conjunction predicts an event to occur about 73 days after Friday, 07 March 1997 (the SR date), which is on Monday, 19 May 1997 (Day 139 of 1997).

3.5 The converse Moon-PC10 conjunction: visualization

[\[Back to TOC\]](#)

In Section 3.4, we calculated the arc of direction for my SR-related Moon-PC10 conjunction, which corresponds to a converse primary direction that predicts an event to occur Monday, 19 May 1997. In order to visualize this primary direction, let's apply Technique #PD2 of Section 1.9.

As previously found in Section 3.4, the Moon-PC10 square was close to exactness at about 72.87441 mean solar days after the SR date. On applying Technique #PD2 for $D \approx 72.87441$, we get

$$(3.93182446 \times D) \text{ min} \approx 286.52939 \text{ min} \approx 4 \text{ hr} + 46 \text{ min} + 32 \text{ sec}$$

as the chart-change term. On taking the Moon-PC10 conjunction to be neo-converse, we subtract the chart-change term from the SR time (Friday, 07 March 1997 at 03:44:30 pm, CST), thereby

getting 10:57:58 am, CST on the SR date. FIGURE 3.5 presents the pertinent pre-SR symbolic chart, and it provides a visualization of my SR-related Moon-PC10 conjunction.

FIGURE 3.5: Pre-SR symbolic chart

(PC12) 17:02 WS12 TA	Sa 07:22 (PC11) 08:37 WS11 AR	(PC10) 00:12 Ve 10:39 Me 13:36 Su 17:09 WS10 PI	(PC9) 08:37 Ju 10:14 Mo 28:07 WS9 AQ	(PC8) 17:02 WS8 CP
(PC1) 25:27 WS1 GE	Aakhut Em Bak (Tropical) Pre-SR Symbolic Chart Friday, 07 MAR 1997 at 10:57:58 CST Chicago, IL (41° 51' N; 87° 39' W)			(PC7) 25:27 WS7 SA
(PC2) 17:02 WS2 CN	(PC3) 08:37 WS3 LE	(PC4) 00:12 WS4 VI	Ma 00:23 R (PC5) 08:37 WS5 LI	(PC6) 17:02 WS6 SC

Let's interpret my Moon-PC10 conjunction with regard to my SR chart and my pre-SR symbolic chart. For SR Moon (in FIGURE 3.4), we find the following:

[SR] Moon in PH7: Moon is the lord of PH12 (trying situations), and it is the natural representative of nurturers and stages of change. Moon lies in the intersection of PH7 (partnerships) and Pisces WS8 (an ending that facilitates transformation). At her best, feminine Pisces is resilient and shows kindly concern for others. In light of the foregoing, Moon refers to me as partnering with others in order to bring forth helpful transformation.

Waning Moon is malefic. As a nocturnal malefic lying above the horizon, Moon is unhappy. Therefore, Moon brings difficulties that require great effort to overcome. PH7 allows 100% quadrant-house strength, and so Moon quickly brings difficulties.

For pre-SR Moon (in FIGURE 3.5), we find the following:

[Pre-SR] Moon in PH9: Moon is the lord of PH2 (supportive persons or things), and it is the natural representative of nurturers and stages of change. Moon lies in the intersection of PH9 and Aquarius WS9, both houses referring to spiritual or professional know-how. At his best, masculine Aquarius is unselfish and makes improvements for the common good. In light of the foregoing, Moon refers to me as using spiritual or professional know-how to further the common good.

Waning Moon is malefic. As a nocturnal malefic lying above the horizon, Moon is unhappy. Therefore, Moon brings difficulties that require great effort to overcome. PH9 allows 50% quadrant-house strength, and so Moon brings difficulties at a relatively good pace.

The Moon-PC10 conjunction (in FIGURE 3.5) refers to me as using spiritual or professional know-how to better help myself and others.

After finding a natal-related primary direction that predicts a particular event, it becomes legitimate to look for a pertinent SR-related primary direction. In Section 3.3, we found that my natal-related Jupiter-PC10 square corresponds to my spiritual initiation in Nigeria. My SR-related Moon-PC10 conjunction predicts a date of Monday, 19 May 1997, which was 3 days before Thursday, 22 May 1997 (the prominent day of my initiation period).

3.6 The direct Mercury-PC1 trine: calculation

[\[Back to TOC\]](#)

FIGURE 3.6 presents my lunar-return (LR) chart for late May 1997. With regard to this chart, the Mercury-PC1 trine corresponds to a direct primary direction in which Mercury's sinister-trine copy (MSTC) is the active promissor and the Ascendant (in PC1) is the fixed significator. Both MSTC and the Ascendant lie in the lower eastern sky. From Section 1.4, we find that

$$\text{arc of direction} = (OA)_P - (OA)_{Asc} ,$$

where the subscript P refers to the promissor.

FIGURE 3.6: My LR chart for late May 1997

Me 01:45 (PC12) 19:50 Su 25:40 WS12 TA	(PC11) 11:31 Sa 15:47 WS11 AR	(PC10) 03:12 WS10 PI	(PC9) 11:31 Ju 20:59 WS9 AQ	(PC2) 19:50 WS8 CP
Ve 07:07 (PC1) 28:08 WS1 GE	Aakhut Em Bak Lunar-Return Chart (Tropical) Friday, 16 MAY 1997 at 07:34:08 CDT Chicago, IL (41° 51' N; 87° 39' W)			(PC7) 28:08 WS7 SA
(PC2) 19:50 WS2 CN	(PC3) 11:31 WS3 LE	MSTC 01:45 (PC4) 03:12 Mo 18:08 Ma 18:45 WS4 VI	(PC5) 11:31 WS5 LI	(PC6) 19:50 WS6 SC

Firstly, let's calculate the pertinent obliquity value. Between the LR time (Friday, 16 May 1997 at 07:34:08 CDT, or 12:34:08 UTC) and the epoch J2000.0 (Saturday, 01 January 2000 at approximately 12:00 UTC), the elapsed time in Julian years is approximately

$$\frac{[3 \times 365 - (30 + 28 + 31 + 30 + 16 + \frac{0.5}{24})] \text{ days}}{365.25 \text{ days/yr}} \approx 2.62827972 \text{ yrs},$$

and so the signed number of Julian centuries since the epoch J2000.0 is

$$T \approx -\frac{2.62827972 \text{ yrs}}{100 \text{ yrs}} = -0.262827972.$$

On making use of the obliquity formula in Section 1.1, we get

$$\begin{aligned} \varepsilon &\approx 23^\circ 26' 21.406'' - 46.836769'' \times (-0.262827972) \\ &\approx 23^\circ 26' 21.406'' + 12.3100130'' = 23^\circ 26' 33.7160130'' \approx 23.44270^\circ. \end{aligned}$$

Note that T is positive for dates after the epoch and negative for dates before the epoch.

Secondly, let's use pertinent formulas of Section 1.1 to deal with Mercury's sinister-trine copy (MSTC). In the LR chart (FIGURE 3.6), Mercury is at Taurus $01^\circ 45' 38''$ with an ecliptic latitude of $-03^\circ 16' 28''$. MSTC is at Virgo $01^\circ 45' 38''$ with a Bianchini ecliptic latitude of $(-03^\circ 16' 28'') \times \cos 120^\circ = -01^\circ 38' 14''$. Therefore, we have

$$\begin{aligned} \lambda_p &= 150^\circ + 01^\circ 45' 38'' = 151^\circ 45' 38'' \approx 151.76056^\circ, \\ \beta_p &= -01^\circ 38' 14'' = -1.63722^\circ. \end{aligned}$$

We find that MSTC's declination is

$$\begin{aligned} \delta_p &= \arcsin(\sin \varepsilon \times \cos \beta_p \times \sin \lambda_p + \cos \varepsilon \times \sin \beta_p) \\ &\approx \arcsin[\sin 23.44270^\circ \times \cos(-1.63722^\circ) \times \sin 151.76056^\circ \\ &\quad + \cos 23.44270^\circ \times \sin(-1.63722^\circ)] \\ &\approx +9.31995^\circ. \end{aligned}$$

The equinoctial distance here is

$$\begin{aligned} (ED)_p &= \arccos\left(\frac{\cos \beta_p \times \cos \lambda_p}{\cos \delta_p}\right) \approx \arccos\left[\frac{\cos(-1.63722^\circ) \times \cos 151.76056^\circ}{\cos(+9.31995^\circ)}\right] \\ &\approx 153.17621^\circ. \end{aligned}$$

Because $\lambda_p < 180^\circ$, we get $(RA)_p = (ED)_p \approx 153.17621^\circ$ as MSTC's right ascension. My geographic latitude of birth is $\Phi = 41^\circ 51' N = +41.85^\circ$. For MSTC's ascensional difference, we get

$$\begin{aligned} (AD)_p &= \arcsin(\tan \delta_p \times \tan \Phi) \approx \arcsin[\tan(+9.31995^\circ) \times \tan(+41.85^\circ)] \\ &\approx 8.45268^\circ, \end{aligned}$$

and so

$$(OA)_p = (RA)_p - (AD)_p \approx 153.17621^\circ - 8.45268^\circ = 144.72353^\circ$$

is MSTC's oblique ascension.

Thirdly, let's use pertinent formulas of Section 1.1 to deal with the Ascendant. In the LR chart (FIGURE 3.6), the Ascendant is at Gemini 28° 08' 50'' with an ecliptic latitude of 0° exactly. Therefore, we have

$$\lambda_{Asc} = 60^\circ + 28^\circ 08' 50'' = 88^\circ 08' 50'' \approx 88.14722^\circ, \quad \beta_{MC} = 0^\circ.$$

We find that the Ascendant's declination is

$$\begin{aligned} \delta_{Asc} &= \arcsin(\sin \varepsilon \times \cos \beta_{Asc} \times \sin \lambda_{Asc} + \cos \varepsilon \times \sin \beta_{Asc}) \\ &\approx \arcsin(\sin 23.44270^\circ \times \cos 0^\circ \times \sin 88.14722^\circ + \cos 23.44270^\circ \times \sin 0^\circ) \\ &\approx +23.42971^\circ. \end{aligned}$$

The equinoctial distance here is

$$\begin{aligned} (ED)_{Asc} &= \arccos\left(\frac{\cos \beta_{Asc} \times \cos \lambda_{Asc}}{\cos \delta_{Asc}}\right) \approx \arccos\left[\frac{\cos 0^\circ \times \cos 88.14722^\circ}{\cos(+23.42971^\circ)}\right] \\ &\approx 87.98066^\circ. \end{aligned}$$

Because $\lambda_{Asc} < 180^\circ$, we get $(RA)_{Asc} = (ED)_{Asc} \approx 87.98066^\circ$ as the Ascendant's right ascension. My geographic latitude of birth is $\Phi = 41^\circ 51' N = +41.85^\circ$. For the Ascendant's ascensional difference, we get

$$\begin{aligned} (AD)_{Asc} &= \arcsin(\tan \delta_{Asc} \times \tan \Phi) \approx \arcsin[\tan(+23.42971^\circ) \times \tan(+41.85^\circ)] \\ &\approx 22.83910^\circ, \end{aligned}$$

and so

$$(OA)_{Asc} = (RA)_{Asc} - (AD)_{Asc} \approx 87.98066^\circ - 22.83910^\circ = 65.14156^\circ$$

is the Ascendant's oblique ascension.

Now we are ready to deal with the arc of direction for the direct Mercury-PC1 trine. We find that

$$\text{arc of direction} = (OA)_P - (OA)_{Asc} \approx 144.72353^\circ - 65.14156^\circ = 79.58197^\circ.$$

According to the LR time-key, this arc indicates

$$79.58197 \text{ deg} \times \frac{0.0758932839 \text{ day of age}}{1 \text{ deg}} \approx 6.03974 \text{ days of age},$$

and so the direct Mercury-PC1 trine predicts an event to occur about 6 days after Friday, 16 May 1997 (the LR date), which is on Thursday, 22 May 1997 (Day 142 of 1997).

3.7 The direct Mercury-PC1 trine: visualization

[\[Back to TOC\]](#)

In Section 3.6, we calculated the arc of direction for my LR-related Mercury-PC1 trine, which corresponds to a direct primary direction that predicts an event to occur Thursday, 22 May 1997. In order to visualize this primary direction, let's apply Technique #PD3 of Section 1.9.

As previously found in Section 3.6, the Mercury-PC1 trine was close to exactness at about 6.03974 mean solar days after the LR date. On applying Technique #PD3 for $D \approx 6.03974$, we get

$$(52.5616768 \times D) \text{ min} \approx 317.45886 \text{ min} \approx 5 \text{ hr} + 17 \text{ min} + 28 \text{ sec}$$

as the chart-change term. Because the Mercury-PC1 trine is direct, we add the chart-change term from the LR time (Friday, 16 May 1997 at 07:34:08 am, CDT), thereby getting 12:51:36 pm, CDT on the LR date. FIGURE 3.7 presents the pertinent post-LR symbolic chart, and it provides a visualization of my LR-related Mercury-PC1 trine.

FIGURE 3.7: Post-LR symbolic chart

(PC12) 00:37 WS12 LE		Ve 07:24 (PC11) 28:49 WS10 GE	Me 01:53 Su 25:53 (PC10) 27:01 WS9 TA	(PC8) 00:37 Sa 15:48 (PC9) 28:49 WS8 AR
(PC1) 02:25 Ma 18:48 Mo 20:45 WS1 VI	Aakhut Em Bak (Tropical) Post-LR Symbolic Chart Friday, 16 MAY 1997 at 12:51:36 CDT Chicago, IL (41° 51' N; 87° 39' W)			(PC7) 02:25 WS7 PI
(PC2) 00:37 (PC3) 28:49 WS2 LI	(PC4) 27:01 WS3 SC	(PC5) 28:49 WS4 SA		(PC6) 00:37 Ju 21:00 WS6 AQ

Let's interpret my Mercury-PC1 trine with regard to my LR chart and my post-LR symbolic chart. For LR Mercury (in FIGURE 3.6), we find the following:

[LR] Mercury in PH11: Mercury is the lord of PH1 (the native's well-being) and PH4 (a secure footing), and it is the natural representative of clever action and expertise. Mercury lies in the intersection of PH11 (comrades and shared interests) and Taurus WS12 (trying situations). At her best, feminine Taurus is doggedly determined to make tangible progress in achieving a better quality of life. In light of the foregoing, Mercury refers to me as cooperating with others in order to get a secure footing in life.

Mercury is benefic because its dispositor is benefic Venus. Mercury lies zodiacally behind Sun, and so it is diurnal. As a diurnal benefic lying above the horizon, Mercury is happy. Therefore, Mercury brings difficulties that require moderate effort to overcome. PH11 allows 50% quadrant-house strength, and so Mercury brings difficulties at a relatively good pace.

For post-LR Mercury (in FIGURE 3.7), we find the following:

[Post-LR] Mercury in PH9: Mercury is the lord of PH1 (the native's well-being) and PH10 (achieving something significant; gaining prestige), and it is the natural representative of clever

action and expertise. Mercury lies in the intersection of PH9 and Taurus WS9, both houses referring to spiritual or professional know-how. At her best, feminine Taurus is doggedly determined to make tangible progress in achieving a better quality of life. In light of the foregoing, Mercury refers to me as using spiritual or professional know-how to achieve a better quality of life.

Mercury is benefic because its dispositor is benefic Venus. Mercury lies zodiacally behind Sun, and so it is diurnal. As a diurnal benefic lying above the horizon, Mercury is happy. Therefore, Mercury brings difficulties that require moderate effort to overcome. PH9 allows 50% quadrant-house strength, and so Mercury brings difficulties at a relatively good pace.

The Mercury-PC1 trine (in FIGURE 3.7) refers to me as using spiritual or professional know-how to better help myself and others.

After finding a natal-related primary direction that predicts a particular event, it becomes legitimate to look for a pertinent SR-related primary direction. In Section 3.3, we found that my natal-related Jupiter-PC10 square corresponds to my spiritual initiation in Nigeria. After finding an SR-related primary direction that predicts a particular event, it becomes legitimate to look for a pertinent LR-related primary direction. My LR-related Mercury-PC1 trine predicts a date of Thursday, 22 May 1997, which was the prominent day of my initiation period.

Bibliography

[\[Back to TOC\]](#)

1. Bak, Aakhut Em, *A Taste of Astrology, A Tropical Zodiacal Approach*, unpublished, posted on the website < <https://www.ifakunle.net>>.
2. Borealis, Alexey, *Predictive Astrology Textbook*, The Wessex Astrologer (2025), ISBN-10: 1916625363, ISBN-13: 978-1916625365; various articles from the blog website <<https://morinus-astrology.com/blog/author/alexei-borealis/>>.
3. Gansten, Martin, *Annual Predictive Techniques of the Greek, Arabic and Indian Astrologers*, The Wessex Astrologer (2020), ISBN-10: 1910531413, ISBN-13: 978-1910531419; *Primary Directions: Astrology's Old Master Technique*, The Wessex Astrologer (2009), ISBN-10: 1902405390, ISBN-13: 978-1902405391.
4. Louis, Anthony, *Secrets of Predictive Astrology*, 1st edition, Llewellyn Publications (2023), ISBN-10: 0738774642, ISBN-13: 978-0738774640; *Primary Directions in Astrology: A Primer, Kindle Edition 1.0* (2013); various articles from the blog website <<https://tonylouis.wordpress.com/author/tonylouis/>>.
5. Uysal, Sira Nur, the blog post *What are Primary Directions? The Most Powerful Predictive Technique of Ancient Astrology* (06 April 2026). The blog website is <<https://sirauysal.com/en/blog/>>.
6. Ventura, João Miguel Jones, the blog post *Predictive Directions – A Simple Approach* (30 November 2014); the blog post *On Diurnal and Nocturnal Arcs* (24 November 2014). The blog website is <<https://flatangle.com/blog/>>.

Index

[\[Back to TOC\]](#)

A

active sphere, 4
arc of direction, 5
ascensional difference, 6

B

Bianchini aspect circle, 4

D

declination, 3
direct primary direction, 5
diurnal semi-arc, 6

E

equinoctial distance, 3

F

fixed sphere, 4

H

horizontal distance, 6
house cusp, 5

J

Julian year, 3

L

LR time-key, 13

M

mean solar day, 10
mean tropical year, 10
meridian distance, 6

N

Naibod time-key, 11
neo-converse primary direction, 5
nocturnal semi-arc, 6

O

oblique ascension, 6
oblique descension, 6
obliquity, 3

P

Porphyry house system, 20
primary direction, 4
primary motion, 4
promissor, 5
proportional location, 6
Ptolemy time-key, 11

Q

quadrant-house system, 5

R

right ascension, 3

S

secondary motion, 12

sidereal day, 10

sidereal year, 10

significator, 5

SR time-key, 13

T

traditionally converse primary direction, 5

tropical month, 13

W

whole-sign house system, 20