

ORBS IN HARMONIC CHARTS

Let's begin with a few definitions and facts that I'll use throughout. First, when discussing n^{th} harmonic charts or angles,, I'll always assume that n is a counting number. In other words, one of the numbers 1, 2, 3, 4, and so on. Also, given a counting number n for our harmonic, I'll call the angle $\frac{360^\circ}{n}$ the root n^{th} harmonic angle, and the complete set of n^{th} harmonic angles consists of $1 \cdot \frac{360^\circ}{n}, 2 \cdot \frac{360^\circ}{n}, 3 \cdot \frac{360^\circ}{n}, \dots, n \cdot \frac{360^\circ}{n} = 360^\circ = 0^\circ \text{ modulo } 360^\circ$. This last equivalence of 360° with 0° happens because we are doing "clock arithmetic." However, instead of having a clock that starts over with zero once we reach 12 hours, our zodiac clock consists of 360 "hours" that we call "degrees," and when we reach 360° , that's the same as 0° . Now here are a few useful facts.

FACT 1: To find the n^{th} harmonic of any angle, either between two planets or as measured from 0° Aries, simply multiply that angle by n and express the result as angle between 0° and 360° . For example, let's consider my Sun which is at $2^\circ \text{ II } 12'$, and let's find it's position in the 5^{th} harmonic. To do this we have to first find the angle between my Sun and 0° Aries, and that is equal to $60^\circ + 2^\circ + \frac{12}{60}^\circ = 62.2^\circ$. Next, we multiply this by 5 to get $5 \cdot 62.2^\circ = 312.5^\circ$. Our final step is to express this result in standard astrological notation as $312.5^\circ = 12.5^\circ \text{ Aquarius} = 12^\circ \approx 30'$. As another example, suppose that the angle between two planets is 90° and we want to find out what this angle would be in a 6^{th} harmonic chart. Then again we can just multiply this angle by 6 and then express the result *modulo* 360° ¹, and this gives us $6 \cdot 90 = 540^\circ = (540 - 360)^\circ \text{ modulo } 360^\circ = 180^\circ$.

FACT 2: If k is a counting number, then the k^{th} harmonic of any n^{th} harmonic angle is always another n^{th} harmonic angle. For example, the 3^{rd} harmonic angles are $120^\circ, 240^\circ$, and 0° , and if we want to find the 5^{th} harmonic of these angles, then we multiply each angle by 5 and express the result *modulo* 360° . The results are given below.

$$\begin{aligned} 5 \cdot 0^\circ &= 0^\circ \text{ modulo } 360^\circ = 0^\circ \\ 5 \cdot 120^\circ &= 600^\circ \text{ modulo } 360^\circ = 600^\circ - 360^\circ = 240^\circ \\ 5 \cdot 240^\circ &= 1200^\circ \text{ modulo } 360^\circ = 1200^\circ - 3 \cdot 360^\circ = 120^\circ \end{aligned}$$

FACT 3: The n^{th} harmonic of any n^{th} harmonic angle is equal to $0^\circ \text{ modulo } 360^\circ$. This can be seen quite easily by noting that if k is a counting number and $k \cdot \frac{360^\circ}{n}$ is an n^{th} harmonic angle, then $n \cdot k \cdot \frac{360^\circ}{n} = k \cdot 360^\circ \text{ modulo } 360^\circ = 0^\circ$.

Natural Orbs

Now that we are armed with some initial definitions and a few salient facts, let's talk about orbs both in general and for particular harmonics. Thus, let's suppose that we have only two aspects, conjunction and

¹ In other words, express the result as an angle between 0 degrees and 360 degrees by subtracting, as needed, multiples of 360 degrees from the result in order to bring things into the desired range.

opposition, or in other words 0° and 180° , and let's note that these are also the 2nd harmonic angles. Then the natural orb for these aspects would be 90° . This is because if, for example, two planets are less than 90° apart, then they are closer to conjunction than to opposition, and if, on the other hand, the planets are more than 90° apart, then they are closer to opposition than to conjunction. Similarly, if the only aspects we are considering are conjunction, waxing trine, and waning trine, ($0^\circ, 120^\circ, 240^\circ$), then these are 3rd harmonic angles and the natural orb for each is 60° since this angle defines those points that are midway between any two consecutive 3rd harmonic angles. From these examples you might correctly conclude that the natural orb for any n^{th} harmonic angle is just half of the root n^{th} harmonic angle ($\frac{1}{2} \cdot \frac{360^\circ}{n}$). Thus, for example, the natural orb for 12th harmonic angles is $\frac{1}{2} \cdot \frac{360^\circ}{12} = 15^\circ$, and the natural orb for 24th harmonic angles is $\frac{1}{2} \cdot \frac{360^\circ}{24} = 7\frac{1}{2}^\circ$.

Notice that I'm not saying that if, in the case of 2nd harmonic angles, two planets are separated by a natural orb of 90° that they are in a strong conjunction or opposition. All I'm saying, in the case of the 2nd harmonic aspects of conjunction and opposition, is that 90° is the dividing point between being closer to one of the 2nd harmonic aspects or the other. The beauty of natural orbs, though, is that if one uses a set of n^{th} harmonic angles as one's aspect set and if one uses the natural n^{th} harmonic orb for these aspects, then every planet will form some sort of aspect with every other planet, and nothing will ever be "void of course." This seems to me the way that things should be, that everything should always be in some sort of relationship with everything else, and, thus, one just needs to decide upon the best harmonic angles to use for aspects. Our zodiac, of course, is divided into 12 segments of 30° each, and the beauty of 12th harmonic aspects is that they combine the most difficult aspect (the square) with the most pleasant aspect (the trine). However, the natural 12th harmonic orb for an aspect would be 15° , and, in practice, that is a rather large orb to use. Hence, let's examine the 24th harmonic. The set of 24th harmonic angles includes, in part, the 12th harmonic angles of $0^\circ, 30^\circ, 60^\circ, 90^\circ, 120^\circ, 150^\circ, 180^\circ, 210^\circ, 240^\circ, 270^\circ, 300^\circ,$ and 330° , and these angles are known, respectively as conjunction, waxing semisextile, waxing sextile, waxing square, waxing trine, waxing inconjunct, opposition, waning inconjunct, waning trine, waning square, waning sextile, and waning semisextile. Additionally, the set of 24th harmonic aspects includes not only these 12th harmonic angles, but also twelve more aspects that are the odd multiples of 15° . Specifically, $15^\circ, 45^\circ, 75^\circ, 105^\circ, 135^\circ, 165^\circ, 195^\circ, 225^\circ, 255^\circ, 285^\circ, 315^\circ,$ and 345° , and these are sometimes referred to, respectively, as waxing quattuorvigintile, waxing semisquare, waxing squile, waxing squine, waxing sesquiquadrate, waxing quindecile, waning quindecile, waning sesquiquadrate, waning squile, waning squile, waning semisquare, and waning quattuorvigintile. I refer to those 24th harmonic aspects that are also 12th harmonic aspects as my primary aspects, and I refer to the remaining 24th harmonic aspects as my secondary aspects. I interpret my primary, 12th harmonic aspects as representing way stations along the journey, and I see the remaining, secondary 24th harmonic aspects as points of transition from one primary aspect to another. In other words, energy is temporarily at rest at the primary aspects and in motion at the secondary aspects. Furthermore, the natural orb for 24th harmonic aspects is $7\frac{1}{2}^\circ$, and this is comparable to what many astrologers today might use, and it is also very close to the $7\frac{1}{4}^\circ$ orb that is used with 12th harmonic aspects in the ancient Tajika school of astrology that combines Greek, Persian, and Indian influences.

You undoubtedly have noticed that certain minor aspects that have recently become more widely used such as the novile, septile, and quintile do not appear in my set of 24th harmonic aspects. However, I would

say that they actually are included in a very real sense. For example, the septile is an aspect of $51\frac{3}{7}^\circ$, and it lies in between a semisquare and a sextile in my aspect set. Hence, since I think of the sextile as the “first date” in what I call the *cycle of becoming*², as one approaches this sextile or first date one tends to become more disciplined and focused on the task at hand, and this corresponds well with astrologer David Cochrane’s experience of the septile as indicating self-control, introversion, and focused attention. Thus, I don’t really exclude these other minor aspects. I just incorporate them into my usual 24th harmonic aspects as tertiary aspects, and I use the *cycle of becoming* that I’ve described in other writings as my basis for interpreting all aspects. And in so doing, one has to also make sure that what is deduced in theory and what is observed in application are able to find common ground.

Orbs of Influence versus Orbs of Error

There are two different ways in which the term “orb” is routinely used in astrology. The first is as the orb of influence for an aspect, and that is the sense in which it is used in my discussion above. The other use of the term orb, however, is as a measure of the deviation that an aspect is from exact. Thus, if two planets are 94° apart, then one commonly says that they are square one another with an orb (deviation or error) of 4° from exact. What one should be aware of, though, is that the process of creating an n^{th} harmonic chart magnifies this error since, in this case, it would multiple 4° by n . Thus, if two planets are within 2° of an exact conjunction in the natal chart (1st harmonic), then they would be 24° apart in the 12th harmonic chart, and this could be one motivation for using wider than usual orbs for conjunctions in higher harmonics. John Addey, the creator of Western harmonic astrology, used an orb of 12° for conjunctions and then $\frac{12^\circ}{n}$ for general n^{th} harmonic aspects. Meanwhile, David Cochrane has expanded this to 16° for conjunctions and $\frac{16^\circ}{n}$ for general n^{th} harmonic aspects³ for his school of vibrational astrology. I, on the other hand, use orbs that are both larger and smaller than this at the same time in my current approach to harmonic charts that I’ll now describe below.

My Approach to Harmonics versus the Vibrational Astrology Approach

I often describe David Cochrane as the current “Sorcerer Supreme” of vibrational and harmonic astrology. He has both an advanced degree in data analysis and decades of experience that involves thousands of individual horoscopes, and, thus, his words and thoughts should always carry a lot of weight. Also, while his approach involves a fair amount of theory, I see the bulk of it as empirical which is as it should be since practical observations always need to come before theoretical models if you want your results to be truly evidence-based. However, once a sufficient amount of data has been collected, then it is time to revisit theoretical models in order to determine how well they are still explaining the data and to see if improvements can be made. That is what I tend to do since my background is in pure mathematics. Hence,

² See www.docbenton.com/cycleofbecoming.pdf.

³ This procedure insures, under the assumption of an even distribution of planets throughout the zodiac, that the theoretical probability for any two planets to form an n^{th} harmonic angle is always the same regardless of the value of n .

while I do not have the same range of astrological experience as David, I can, nonetheless, look at things from a theoretical perspective, make predictions about what should happen in practice, and then vet the results through examining my chart and the charts of people I know. And while more vetting is needed on a larger scale, many of my conclusions appear to work in practice. However, there are a few subtle differences between my approach to harmonics and the approach taken in vibrational astrology which I'll try to enumerate below.

First, as I've mentioned, vibrational astrology uses an orb of 16° for conjunctions and, in general, an orb of $\frac{16^\circ}{n}$ for other n^{th} harmonic aspects. I, on the other hand, begin with an orb of $7\frac{1}{2}^\circ$ regardless of the harmonic, and then I go back and use smaller orbs in order to identify which aspects are strongest. I'll also even allow orbs up to 15° and consider two planets conjunct, albeit weakly, just by occupying the same sign as is commonly done in Vedic astrology, but then I'll also couple this with the view provided by the traditional aspects of vibrational astrology⁴. Additionally in vibrational astrology, great emphasis is put on aspect combinations involving three or more planets, and I, too, consider this a good rule of thumb. However, I also, perhaps, place more importance on signs and houses than I often see vibrational astrologers doing. The latter seem to me to focus more on the aspects between planets, and while this is paramount, I also see the rising sign and the sign and house of the Sun and Moon as quite significant. In particular, the fact that you can use a zodiac at all in a harmonic chart is an indication that the zodiac is defined by parts of a cycle and not by constellations in the sky. When it comes to additional methods for interpreting a harmonic chart, I proceed in pretty much the same way as most vibrational astrologers. I focus on the most fundamental meanings of the planets in order to describe the "weather" without straying too much into making overly specific predictions, and I see the traditional good aspects as indicating allies and helpers with the influence usually flowing from the slower planet to the faster planet.

One nuance that I've added, however, as a result of the mathematics behind my model, is the mathematical concept of a "quotient structure⁵" where the "two become one." This type of union which results from pieces of a puzzle coming together is a unifying concept for much of astrology since the goal of any synodic cycle is that final conjunction that occurs at the end and during which all the experiences encountered along the way come together to produce an evolutionary leap after assimilation. Furthermore, since every n^{th} harmonic angle is converted to a union (0°) in an n^{th} harmonic chart, this suggests that the n^{th} harmonic chart represents who we will be after we have mentally completed all the n^{th} harmonic cycles that are present in our birth chart. Thus, if, for example, you have several squares in your birth chart, then the 4^{th} harmonic chart will show you who you will be after you have resolved to some extent the tensions inherent in those aspects. Most people learn from life, and they grow and change with each challenge encountered, and as a result, negative aspects encountered in later years are often not experienced as severe as they might be when younger. By exercising our free will and assimilating lessons learned, we evolve as we mentally complete the cycles that we are born with. To the extent that someone does this, they will also be less predictable from an astrological perspective since their life is now guided more by free will and an expanded perspective. However, there are also those people who seem to never learn and never evolve, and they are the ones who are most predictable from

⁴ If you own Sirius 3.0 astrological software, then, under the Standard tab for Wheel Style, select "K=Big, Large inner area," and this should also automatically choose "Harmonic, Med, Major Only" for your aspect set.

⁵ Additional information on quotient structures can be found at www.docbenton.com at the bottom of the page under the heading Q-Astrology: Quaint (traditional), Quantitative, Quotient, Questing, and Questioning.

an astrological point of view. If they never evolve, then they will tend to keep reacting the same way to circumstances over and over again. Very predictable.

To understand a particular harmonic there are a variety of approaches that can be used, both theoretical and empirical. For instance, in considering the 12th harmonic chart, one can be guided from theory by the fact that $12 = 4 \cdot 3$. Hence, one expects the 12th harmonic to have characteristics of both squares and trines, and in this way the 12th harmonic chart should encapsulate the gamut of basic human experience, and this is also why I believe a 12-sign zodiac works so well. Likewise, since $6 = 2 \cdot 3$, one expects the 6th harmonic chart and angles (angles that are multiples of 60°) to display both the ease of trines and the integrative quality of oppositions. Another way to further understand harmonics, though, is purely empirical. In particular, listen to what other astrologers have observed in practice regarding harmonics. This is extremely important because we always need to find a harmony between theory and facts. For example, if one has a beautiful theory that doesn't correspond to the facts, then that theory has no merit, and many early interpretations of harmonic charts that depended more on past beliefs about number symbolism and numerology and less upon direct observation fell quickly into this category. When it comes to theoretical interpretations, however, I interpret all aspects in terms of where they fall within the *cycle of becoming* that I've discussed elsewhere, and for harmonic angles that are less than 30° , I'll subdivide the sign of Aries into 144 parts (two zodiacs) in order to get additional clarification. For example, if I want to use this technique to clarify the meaning of the root 13th harmonic angle, then I begin by noting that $\frac{360^\circ}{13} = 27.\overline{692307}^\circ$. This puts it in the sign of Aries, and if we subdivide Aries into 12 parts, then our angle falls within the last or Pisces subdivision of this zodiac. And if we subdivide this Pisces subdivision into another 12-part zodiac, then it is in the first or Aries subdivision of this latter zodiac. Hence, with an Aries-Pisces-Aries influence, I would expect the 13th harmonic (chart and angle) to denote a mental orientation (first Aries), a tendency toward higher vibrations of a spiritual or artistic nature (Pisces), and a fair amount of independence and self-initiative in pursuit of this goal (second Aries). And this all corresponds well with what David Cochrane has observed and written about the 13th harmonic (with occasional underlining added by me):

“A deep inner need to transcend one's current level of functioning. A distaste for mediocrity and a love of the exceptional and extraordinary. Enthusiasm and vision for a much higher level of achievement. Unwillingness to compromise on one's mission. Self-willed and self-motivated but able to work hard at goals that are important to the person.”

Thus, I apply all of these techniques to help me better understand harmonic charts, and though my orbs and techniques are not always the same as those employed by all vibrational and harmonic astrologers, we often seem to, nonetheless, wind up at the same place. And that is what we want to happen as theory and practice converge through continual evolution. I am always in the process of learning, and by listening to data and the observations of others and by changing or adding to theoretical models when necessary, both I and astrology will continue to grow and evolve.