A Brief Research Note on an Astrological Condition Related to Male-to-Female Transsexuality

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Abstract

Despite gaps in its information, Astrodatabank is an online astrological database that is constantly being updated and that contains over seventy thousand horoscopes that are classified in a variety of ways such as traits, diagnoses, passions, and vocations, to name a few, and this database provides many opportunities for statistical analysis. Additionally, one reason for using this database to study male-to-female transsexuality is because it is a relatively rare occurrence in our society, and it is presumed that rare events are much more likely to have easily detectable astrological associations. Thus, after some preliminary exploration of the horoscopes of male-to-female transsexuals, it was observed that having Jupiter in either conjunction or opposition to either Uranus or Neptune occurred more often for male-to-female transsexuals than among those who were not classified as male-to-female transsexuals at Astrodatabank. However, when looked at separately, any single one of these aspects in the charts of male-to-female transsexuals that involves Jupiter/Uranus or Jupiter/Neptune occurs but a handful of times, and so the four conditions in our study (conjunction or opposition of Jupiter with Uranus or Neptune) were grouped together so that a more meaningful statistical analysis could be done. Following this and because our assumption was that the male-to-female transsexual population would yield a higher percentage of these aspects than the non-male-to-female-transsexual population, a 1-tailed rather than a 2-tailed z-test for two proportions was performed over the time period for which Astrodatabank has records of male-to-female transsexuals, and the result was that 40% of male-to-female transsexuals have at least one of these aspects in their natal chart as compared to 22% for those not classified as being male-to-female transsexuals, and this difference is significant with a p-value of $p = 0.0001$ and an effect size of $|h| = 0.39$. Furthermore, to show that this result is unlikely to be an artefact, the same statistical test was performed on three different subsets of our data with each subset containing about half the number of male-to-female transsexuals as our original sample, and in each instance a p-value less than 0.05 was obtained. The conclusion is that male-to-female transsexuals are indeed more likely than the non-male-to-female-transsexual population to have Jupiter in conjunction or opposition to either Uranus or Neptune, and this result was shown to hold over different periods of time. All the data used in this study was extracted from Astrodatabank on July 6, 2023. Furthermore, a $10°$ orb was used along with birth data with a Rodden Rating of B or better since these ratings indicate fairly accurate birth data.

Methodology

For centuries, astrology has progressed through case studies that observe what types of aspects or other astrological conditions are most often present when a particular outcome occurs. In other words, astrological advancement is generally based on an analysis of the frequency with which certain celestial conditions occur in connection with particular outcomes, and if a relatively higher frequency is maintained over time, then that celestial condition is taken to be a reliable indicator for the associated outcome. In this respect, a *z-test for two proportions* is the one statistical test that formalizes what most astrologers do anyway in an informal manner. This test starts with a condition C and then one finds the frequency with which C occurs in both some group P and its complement not-P. Next, these frequencies are converted into proportions for both P and not-P, and these proportions are examined to see if their difference from one

another is statistically significant. Also, since preliminary exploration suggested that the male-to-female transsexual population would have a higher percentage of members for which Jupiter forms either a conjunction or opposition to either Uranus or Neptune than those not classified as male-to-female transsexuals, a *1-tailed z-test for two proportions* was considered to be the most appropriate statistical test for this situation. One could have used a *chi-square* test instead, but the *chi-square* test is a non-parametric test and as such it has less power than the *1-tailed z-test for two proportions* and, hence, its use increases the likelihood of making a Type II error. Additionally, a *z-test for two proportions* uses a normal curve to approximate probabilities in a binomial distribution, and the conditions for using this test were met (Triola, 2011). Furthermore, to show that our results can be replicated over different time periods, we created three subsets representing the time intervals 1906-1963, 1951-1976, and 1964-2007 such that each contains approximately half of our original sample of male-to-female transsexuals, and for each subset a p-value less than 0.05 was found, thus showing that the statistical significance of the original sample replicates over different time intervals. Also, the overlap between the middle time interval and the other two has the effect of producing a type of "moving average" for effect sizes and p-values. A more ideal methodology might have been to randomly select the members for each subset from our original sample, but we had to work within the constraints of the tools provided by Astrodatabank. Nonetheless, we can now be confident that the claim that male-to-female transsexuals are more likely to have Jupiter in conjunction or opposition to either Uranus or Neptune is one that has been supported statistically over different periods of time.

Results of Statistical Tests

In Table 1 below, each row represents a different time period, and the variables at the top of each column are defined for each time period as follows:

x1 – the number of male-to-female transsexuals in the Astrodatabank database with Jupiter conjunct or in opposition to either Uranus or Neptune

n1 – the total number of male-to-female transsexuals in the Astrodatabank database

x2 - the number of people in the Astrodatabank database who are not classified as male-to-female transsexuals but who also have Jupiter conjunct or in opposition to either Uranus or Neptune

n2 - the total number of people who are not classified as male-to-female transsexuals in the Astrodatabank database

p1 – The proportion $x1/n1$

p2 - The proportion $x2/n2$

ES = |h| - Effect size as measured by the absolute value of *Cohen's h*

z-scores – Standard scores of deviation from the mean that, in this test, are computed by the formula $z = \frac{p1-p2}{\sqrt{\frac{pq}{n1}+\frac{pq}{n2}}}$ where $p = \frac{x1+x2}{n1+n2}$ and $q = 1 - p$

p-value – Probability values for a 1-tailed test that indicate the likelihood of our results being due to chance

Effect size (ES) was computed by calculating the absolute value of *Cohen's h* (Cohen 1988, p. 181) which is defined as $|h| = \left|2sin^{-1}\left(\sqrt{p1}\right) - 2sin^{-1}\left(\sqrt{p2}\right)\right|$. As a rule of thumb, Cohen suggests that a value of

0.2 corresponds to a small effect size, 0.5 to a medium effect size, and 0.8 to a large effect size. However, Cohen goes on to say (Cohen 1988, p. 187),

> "As before, the reader is counseled to avoid the use of these conventions, if he can, in favor of exact values provided by theory or experience in the specific area in which he is working."

For the purposes of this paper, though, we have used Cohen's original criteria of $|h| = 0.2, 0.5,$ or 0.8 as cutoff values for weak, medium, and large effect sizes. Furthermore, for a value of $|h|$ between, for example, 0.35 and 0.5, we say that the effect size is between small and medium but closer to medium.

As can now be seen in Table 1, all of our test results were significant at the 0.05 level, and most of our effect sizes were between small and medium with three of our effect sizes being closer to medium.

Table 1 *Proportion (p1=x1/n1) of Jupiter Conjunctions & Oppositions to Uranus or Neptune in samples of Male-to-Female Transsexuals compared with the proportion (p2=x2/n2) in samples of those not classified as Male-to-Female Transsexuals from 1906-2007 and various subsets of this interval*

This table shows the results of comparing how often Jupiter is conjunct or in opposition to either Uranus or Neptune in samples of male-to-female transsexuals versus samples of people born during the same time period who are not classified as male-to-female transsexuals. The first row shows the results over the entire period of years for which Astrodatabank data was available on male-to-female transsexuals (1906-2007) for the date on which the data was drawn (July 6, 2023) while subsequent rows cover three time periods with each containing approximately half the number of the male-to-female transsexuals that are given in the first row. The overlap of the period 1951-1976 with the periods 1906-1963 and 1964-2007 produces the effect of a "moving average" for both p-values and effect sizes (as measured by the absolute value of Cohen's h) that are highlighted in bold. Also shown are the z-scores that result from a 1-taled z-test for two proportions.
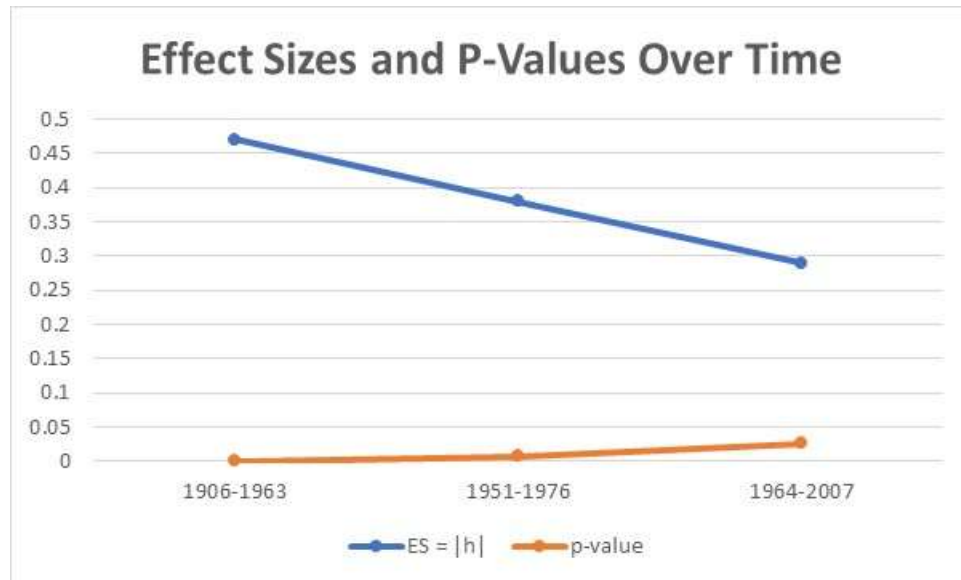
Time Interval	x1	n1	x2	n2	p1	p2	ES = |h|	z-scores	p-value
1906-2007	29	73	9857	45285	0.40	0.22	**0.39****	3.714	**0.00010**
1906-1963	16	36	7323	33739	0.44	0.22	**0.47****	3.307	**0.00047**
1951-1976	15	35	3235	12918	0.43	0.25	**0.38****	2.428	**0.00760**
1964-2007	13	37	2534	11546	0.35	0.22	**0.29***	1.934	**0.02657**

* effect size between small and medium but closer to small
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Additionally, in Figure 1 below, we see that over the three different time intervals we have used that extend from 1906 to 2007 that both effect size and p-value change very linearly.

Figure 1 *Effect Sizes and P-values Over Time*

Effect Sizes and P-Values Over Time

Linear correlation *r* for *effects sizes* = -1
Linear correlation *r* for *p-values* = 0.967

Discussion

From Table 1 it is clear that male-to-female transsexuals appear to be significantly more likely to have Jupiter in conjunction or opposition to either Uranus or Neptune than are people who are not classified as male-to-female transsexuals at Astrodatabank. However, this information comes with a few caveats. First, while these aspects, in some sense, "explain" 40% of the male-to-female transsexuals in our sample from 1906 to 2007, that still leaves 60% whose transsexuality is not yet accounted for either astrologically or by other means. Nonetheless, 40% is still quite a large chunk to be associated with an astrological configuration. Second, while it is true that the results suggest that if someone is a male-to-female transsexual, then there is approximately a 40% chance of their having Jupiter in conjunction or opposition with either Uranus or Neptune as compared to only 22% for the population of those who are not male-to-female transsexuals, it is <u>not</u> true to say that if someone has Jupiter in conjunction or opposition with either Uranus or Neptune, then they are likely to be a male-to-female transsexual. In fact, since in our sample above from 1906 to 2007 there were only 29 known male-to-female transsexuals with this particular astrological condition as opposed to 9857 people from the group that were not classified as male-to-female transsexuals, it follows that the experimental probability of anyone with this astrological condition being a

male-to-female transsexual is only about $\frac{29}{29+985} = \frac{29}{9886} = \frac{number\ of\ male-to-female\ transsexuals\ with\ Jupiter\ conjunct\ or\ opposite\ Uranus\ or\ Neptune}{total\ number\ of\ subjects\ with\ Jupiter\ conjunct\ or\ opposite\ Uranus\ or\ Neptune} \approx 0.3\%.$

To decrease the likelihood of our result over the period from 1906 to 2007 being a statistical artefact, we showed that the result can be replicated on three different sets of data, specifically ones that also represent different time periods. The first and third subsets of our data represent contiguous intervals of time, and the middle subset overlaps the other two so that the changes in effect sizes and p-values can be viewed as a "moving average." The small p-values in Table 1 above support the validity of our assertion that male-to-female transsexuals have Jupiter in conjunction or opposition with either Uranus or Neptune significantly

more often than people who are not classified as male-to-female transsexuals, and the replication of this result over different time periods illustrates the reliability of our assertion and suggests that it is unlikely to be a statistical artefact. Furthermore, since the datasets from 1906 to 1963 and from 1964 to 2007 are independent of one another, the likelihood of significant results for these two time periods happening entirely by chance is estimated, using 0.05 as the cutoff point for significance, to be $0.05^2 = 0.0025$. Consequently, it is highly unlikely that both of these results are mere statistical artefacts. However, we might also note from Table 1 and Figure 1 above that as our time intervals get closer to the present, the effect sizes tend to get smaller and the p-values tend to get larger. This could be the result of either changes in other variables that are also associated with male-to-female transsexuality or due to medical privacy laws resulting in more male-to-female transsexuals being classified as non-male-to-female-transsexuals in the Astrodatabank database or simply due to naturally occurring random fluctuations in the data. The second and third explanations mentioned are indeed a possibility since, for example, an increase of just one person in the number of male-to-female transsexuals in the period from 1964 to 2007 with the given astrological condition would result in a rather dramatic decrease in the p-value and a substantial increase in effect size. It is also possible that the condition of not identifying with one's biological sex as assigned at birth is something that exists along a spectrum and that the astrological signature we've been studying for male-to-female transsexuals applies primarily to only some points along this spectrum.

A final caveat has to do with the words *transsexual* and *transgender*. Some people use these words synonymously while others see *transsexual* as an outdated term, and yet still others use the term *transgender* to refer to anyone who feels that their gender identity is different from the sex they were assigned at birth with *transsexual* being used only to describe those who have additionally undergone medical interventions such as hormone therapy or surgery. To further complicate matters, the biographies available at Astrodatabank use both terms, and it is not clear if distinctions are made between them. However, throughout this paper we have felt obligated to use the term *transsexual* rather than *transgender* simply because that is the name given to the category we drew our data from at Astrodatabank. Additionally, we have taken the point of view that instead of just two genders existing that there are at least four genders that exist, two transgenders and two cisgenders, and in this paper, we have identified an astrological condition that appears to occur significantly more often in one gender, male-to-female transsexuals, than in the other three genders combined.

And as a final remark, little if any prior published research seems to exist on the topic of this paper, but for additional discussion on astrology and transgender people, see the reference below to *The Astrology Podcast* (2020). The charts of two prominent male-to-female transsexual voices, Kate Bornstein and Sylvia Rivera, that are shown on this episode of *The Astrology Podcast* during the course of the discussion interestingly have Jupiter opposite Uranus or Neptune, and a third person discussed, Natalie Wynn, has Jupiter in the sign opposite Uranus but not within a 10° orb.

Additionally, one always wants to interpret one's results, and this is particularly true when astrology is involved. However, interpretations are often subjective and "in the eye of the beholder," and that is as true here as it is anywhere else. Nonetheless, here is my subjective interpretation based on keywords and explanations found at Astrowiki (https://www.astro.com/astrowiki/en/Main_Page). At Astrowiki, Jupiter is described by keywords such as growth and expansion, and it relates to an expansion of one's horizons. Uranus, on the other hand, is described at Astrowiki by terms such as radical change, breaking through boundaries, and unconventional. And lastly, Astrowiki describes Neptune in terms of dissolving boundaries. Astrowiki further describes a conjunction of two planets as an interpenetration of both energies, and it describes an opposition in terms of a need to integrate the planetary drives represented by each pole.

Similar definitions were given by the late Dane Rudhyar in *Astrological Aspects: A Process Oriented Approach*.

> *"At the conjunction beginning the cycle of aspects, the functional activity represented by the slower planet gives, as it were, a new direction, orientation or creative impetus to the activities represented by the faster planet. As the faster planet moves away from the slower, it 'carries out' this new impulse, incorporating it into its activities."* (Chapter 2 – Familiar Aspects)

> *"At the next stage, it grows by trying to relate and integrate the two halves of the field of experience symbolically divided by the opposition aspect."* (Chapter 3 – Less Familiar Aspects)

From the above I would conclude that whether Jupiter is in conjunction or opposition with Uranus or Neptune, the drive for growth (Jupiter) is coupled with a drive for either breaking through (Uranus) or dissolving (Neptune) traditional boundaries. Hence, while life can be very difficult for those who are *transgender/transsexual*, astrology suggests that such an unconventional path may indeed be just what is necessary for that person's growth, and astrology, as it often does, gives us insight into the nature of such an experience without rendering judgement one way or another. It is only we humans who are judgmental.

And finally, let me express my hope that the analysis above might serve as a useful template for others on how to effectively do research using the data available at Astrodatabank. Several decades ago, during the 1970s, China addressed a shortage of medical doctors by training lay people in the basics of first aid and traditional Chinese medicine, and these trained individuals became known by the term "barefoot doctors." In a similar way, astrology is now in need of "barefoot statisticians." Specifically, I believe that all schools of professional astrology need to commit themselves to teaching their students some of the basic principles of probability and statistics and how to apply the *z-test for two proportions* to the data available at Astrodatabank or other databases to identify results of interest that can then be passed on to professional statisticians for further analysis. And by doing so, we can develop an astrology that is not only robust in its traditional use of case studies that examine the whole chart but that is also equally robust in its use of statistics to identify and study the significant impacts of more isolated factors.

Limitations of this Study

This study is both an observational and a retrospective study, and that means that, to some extent, the results have to be taken with a grain of salt. The ideal would be to do a study with randomly selected samples where one sample is a treatment group and the other is a control group. However, that option was not available to us, and, consequently, there is a greater chance that the data we used contains some hidden bias. But as I frequently say, we often have to do statistics not with the data we want, but with the data we have. I would also point out that even random samples can contain some unintentional bias. For example, it is theoretically possible (if not probable) that a sample of people randomly chosen for a survey wind up consisting only of men. Also, it is quite common these days to first use one set of randomly chosen data for exploration and hypothesis building and then use another random sample to test one's hypothesis. In this study, we have tested our hypothesis on at least two distinct intervals of time, and in each instance our alternative hypothesis was supported. Furthermore, since this is a retrospective study, it does not matter what order our tests have been done in. We basically analyzed a snapshot of existing data, and patterns exist within that data regardless of the order in which they are found. The bottom line of this study is that, in each interval of time studied, the proportion of male-to-female transsexuals that exhibited our astrological condition was substantially greater than the corresponding proportion for the sample of people who were not classified as male-to-female transsexuals, and statistical tests and estimations of effect size are only attempts to quantify how meaningful these differences are. But even without such analysis, the differences are striking and can be used to help make educated decisions. Also, a separate analysis not shown in this

paper indicates that our astrological condition is valid only for male-to-female transsexuals and not female-to-male transsexuals. In summary, what we have shown is that there is a pattern in the data that appears to be meaningful and that exhibits both practical and statistical significance, and this pattern is replicated over different time intervals. Thus, even if future studies eventually overturn our results, for now the conclusion that male-to-female transsexuals are more likely to have Jupiter in conjunction or opposition to either Uranus or Neptune is the result that is currently best supported by the data.

Acknowledgements

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