

A summary of 14 research results obtained on the Gauquelin data

Kyösti Tarvainen, PhD, Docent in systems analysis

This article is a summary of fourteen research results obtained by using the Gauquelin data which Patrice Guinard has put on this website. Thirteen studies gave statistically significant support for ordinary astrology; one study dealing with a modern theory presented by Dr. Eugen Jonas obtained only possible partial backing.

Starting points for the studies

A central reason for obtaining positive results is the use of the *multi-factor* approach. In this method, astrological factors pointing in the same direction are taken together into account, or, in some other ways, multiple factors are considered. The following example illustrates this approach.

Michel Gauquelin studied many claims of traditional astrology, but the results were not statistically significant on the whole. Perhaps the main reason was the limited computing capabilities of his time. Therefore, he usually had to study the effect of only one astrological factor. For example, when he studied journalists, he considered how many have the Sun in Gemini. There was no excess.

But nowadays it is easy to take into account, for example, all the 26 astrological factors that Sakoian and Acker, in their *Astrologer's Handbook*, regard as advantageous for journalists. The total excess of these 26 factors among the journalists Michel Gauquelin collected is statistically significant [2]. It is indeed rare to obtain statistically significant results for a single astrological factor since there are so many factors: for example, Sakoian & Acker give an interpretation for over 500 factors. Additionally, many non-astrological elements are always in effect.

For this reason, we also need much data. Most of the astrological statistical studies have suffered from a too small set of data. Therefore, except for a couple of studies, I have used the data of all or almost all groups in the Gauquelins' professional data and all heredity data in the synastry studies. Thus, the sample size has been on average about 10 000 persons for natal charts and about 20 000 couples for synastry studies and 70 000 parent/child pairs for a prognosis study.

In the Gauquelin data, heavy rounding of the birth minute has been made. But especially if all or most groups are taken into account, the errors due to this rounding cancel each other to a significant extent. This fortunate canceling of rounding errors has also been demonstrated by simulations.

After the Gauquelins' time, the increased computing power has also made possible to generate large amounts of control charts. A useful method is the *shuffling* method. In this procedure, control charts are generated by shuffling the data's dates, years, birth hours and places randomly. Jan Ruis published a central study about shuffling in *Correlation* 25(2): 7-44, 2007/2008, and it is further studied in [3]. It is a safe, conservative method: if it shows an excess of factors in the data compared to the generated control group, the real excess compared to the whole population is most likely still bigger.

The multi-factor approach has earlier been used in *astro signatures*, regression analyses and some studies using the chi-squared distribution. These multi-factor studies were mainly “fishing” attempts to find effective astrological factors. But I have always taken some hypotheses as a starting point. Thereby the statistical significance (the p-value) of the obtained results can be determined. The studied hypotheses have been based on the long astrological tradition and foremost astrologers (except the case of Jonas) and they did concern the main psychological astrology (not some fringe issues).

In several studies, simple simulations have been used for example to verify and develop control methods for natal charts and synastry. In these simulations, artificial data with a known excess of some astrological factors are generated by the computer. Then it is checked, how well different methods detect these astrological factors. For these simulations and applying new points of view in the research, basic programming skills have been needed.

I have worked mainly with the Gauquelins’ timed data, but I also realized that, in some aspect (or planets in signs) studies, one can use untimed data since many aspects are effective during several days. I collected untimed data from the internet and biographies of 2,759 mathematicians, 6,285 theologians, and 17,765 lawyers and obtained statistically significant results for these special groups not included in the Gauquelin data. These studies are additionally considered below.

The statistical studies also help to develop astrology’s techniques

Many statistical studies have now backed the traditional astrology. The combined p-value for merely my studies summarized below is of the order of 0.000,000,000,000,000,01. Positive results can be used to study astrology’s technical matters: if something works in an astrological research, we can explore which of the alternative techniques brings the best results. These considerations have included the following issues: which zodiacs, house systems, synastry and prognosis methods work best, and what are the orbs for aspects.

In the studies mentioned below, for example, the following technical observations have been made:

- In two studies [5, 10], the tropical zodiac worked, but not the sidereal one.
- In four studies [1, 5, 11, 13], the Koch house system worked best.
- The orbs can be estimated by computer [12]. The orbs determined by the computer for birth charts have been close to those recommended by the Faculty of Astrological Studies. It suggests an orb of 8° for the conjunction, square, trine and opposition, and 4° for the sextile, and two additional degrees for aspects including the Sun or Moon. As a detail, confirmation was obtained for the fact that the applying orbs are somewhat bigger than the separating ones [7]. In two synastry studies [1, 9], the computer estimated orbs that are about the same or slightly bigger than in the aspects of natal charts. This is a useful result since the astrologers’ recommendations of synastry orbs have varied much.

- As some astrologers have claimed, also old rulers work when considering chart rulers [5].
- In the synastry study [1], the classical synastry obtained strong support, but Davison's method and composite charts did not get support. In fact, Robert Hand, who has written about composite charts, has stated that the classical synastry should always be taken into account.
- In the study of prognosis methods [6], transits and solar arcs (whose basic idea was proposed by Kepler) obtained statistical support, but secondary progression did not (this may, however, depend on the considered application).
- Minor aspects (first proposed by Kepler) obtained statistical support in [16].
- In the study of midpoints [17], many midpoints seemed to be not significant. But there was statistical support for Robert Hand's advice to consider at least those midpoints which contain the strong factors, the Ascendant, MC, Sun or Moon.
- In the study of the Part of Fortune, it was noticed that the single formula to determine it worked better than two formulae separately for day and night births.

These are preliminary results, and further statistical studies may specify and upgrade them. In any case, we see that statistical studies are capable of evaluating and developing technical matters of astrology.

Summary of the research results obtained on the Gauquelin data

In the following, abstracts for 14 statistical studies are given. These studies are based on the Gauquelin data. Additionally, abstracts are also presented for four studies not using the Gauquelin data.

[1] Tarvainen, Kyösti: Classical synastry works on the Gauquelin' data, composite and Davison don't. *The Astrological Journal*, Volume 53, Number 1, January/February 2011.

Abstract. *The Gauquelins' data for heredity studies is here considered from the point of synastry. One would expect that a valid synastry technique shows more sympathetic astrological situations in the parents' charts than in randomly generated couples. The validity of the classical synastry obtained very clear support. First, the partner's Sun was significantly often in the other's 1st, 5th or 7th house, which placements are held favorable for marriage. Second, there was a statistically significant amount of favorable conjunctions and trines across the parents' charts between the Sun, Moon, Mercury, Venus, Jupiter, Ascendant, and Midheaven. No such support was found for two recently proposed techniques, composite charts and Davison's relationship horoscopes. As a byproduct, it was noticed that Koch's house system worked best.*

[2] Tarvainen, Kyösti: Henning's synthesis method shows validity of astrology in the Gauquelins' data. *Correlation* 28(1):25-43, 2012.

Abstract. *Ann Henning has proposed a synthesis method where scores of 12 potentials are determined. The first potential summarizes how much an astrological chart has Aries, Mars, the first house and some similar themes; the second summarizes Taurus, Venus, the second house and similar themes, and so on. The purpose of this research is to study whether, in some professions and groups in the Gauquelins' data (over 23 000 persons), some Henning's potentials are high. The strongest anticipation, based on the astrological literature, was that the 3rd potential of the journalists is high. This anticipation turned out to be true with a p-value 0.03. The control group was generated by shuffling. Altogether there were 14 anticipations from which 13 came true in the right direction. The combined p-value for all anticipations according to Fisher's method is 0.03. Hence, in all, Henning's potentials indicate the validity of ordinary astrology in the Gauquelin's data, although the astrological effects are small. Michel Gauquelin did not see any validity of traditional astrology in this data. The present study indicates that the reason for his negative opinion is that he considered single astrological factors, for example, whether Gemini is a common Sun sign among journalists. However, it seems that single astrological factors alone are seldom strong enough to show a statistically significant effect. In Henning's synthesis method, several astrological factors pointing to the same kind of effect are considered together, and, therefore, it is possible to obtain more readily significant results.*

[3] Tarvainen, Kyösti: A test of overall validity of astrological statements in the handbook by Sakoian and Acker, *Correlation* 28(1): 5-24, 2012.

Abstract. *The validity of 316 statements in The Astrologer's Handbook by Sakoian and Acker was tested. These descriptions concern eleven professions or groups for which the Gauquelins' data was available (over 18 000 persons). Control groups were generated by shuffling all elements of the birth data except for dates for which a random perturbation of at most 30 days was drawn. The validity of this method of forming control groups was ascertained by simulations. It turned out that 180 statements in the handbook were correct and 136 not correct in the Gauquelins' data (hit rate 57% versus 50% by chance). This is a statistically significant result in favor of the overall validity of the statements in the handbook (p-value 0.001). The p-value was determined by (Monte Carlo) simulations. As a by-product, it was noticed that Neptune was prominent in the charts of alcoholics.*

[4] Tarvainen, Kyösti: Effects of Venus/Saturn aspects in marriages. *Correlation* 28(2): 7-14, 2014.

Abstract. *In 20, 892 families in the Gauquelins' heredity data, the age difference in marriages in which the husband has a Venus/Saturn aspect was slightly but significantly larger. Venus/Saturn aspects in both wives' and husbands' charts seemed to delay marriage but did not prevent the marriage.*

[5] Tarvainen, Kyösti: Chart Rulers work on the Gauquelins' data. To appear in *Correlation*.

Abstract. *In the Gauquelins' professional data, the chart Ruler (the Ruler of the Ascendant sign) was found to situate significantly often in a house traditionally related to the individual's group (combined p-value 0.005, excess of 10% in a data of 20 394 individuals). It was noticed (with a*

combined p -value 0.01) that also the Ruler of a house connected to a group often situated in the same house. The main literature source for the connections between houses and professions was Rex E. Bills' Rulership book. Based on the results it was possible to make the following comparisons: Koch's house system was seen to work better than the Placidus, Equal and Whole Sign systems; the new Rulers for Scorpio, Aquarius and Pisces worked better than the old ones; the tropical zodiac was seen to be decidedly better than the sidereal one.

[6] Tarvainen, Kyösti: Do transits, solar arcs or progressions influence spouse's will to have a baby? *NCGR Research Journal*, Volume 5:58-70, 2015.

Abstract. Possible effects of transits, solar arcs and secondary progressions on spouses' decision to have a baby are studied. If these astrological factors have an effect, it can be expected that there is an excess of "beneficial" aspects during a period before conception. All soft aspects (conjunctions, sextiles, and trines) between relevant planets and cardinal points in the studied prediction methods were regarded as beneficial. In the Gauquelins' heredity data containing almost 70 000 parents, it turned out that soft transit aspects to the parent's charts were effective in a statistically significant way ($p=0.0005$). Also, the solar arc method applying the Sun's mean daily motion (Naibod arc) had a statistically significant effect ($p=0.001$). In secondary progressions (day/year), there was no such overall validity for soft aspects. Some aspects of the progressed Sun seemed to work, but this may also be due to the solar-arc-directed (Naibod) Sun since there are no big differences between these two methods. The used maximum orb for all methods was 1° . It was possible to verify that this was, indeed, the working maximum orb for transits and solar arcs, except for transits involving the Sun or Moon, for which an orb of about 2° was estimated.

[7] Tarvainen, Kyösti: On the strength of tight/wide and applying/separating aspects. To appear in *Correlation*.

Abstract. Some astrologers have stated that tight aspects are much stronger than wide ones. But in four sets of data (altogether over 50 000 charts), no consistent support was found for this claim. In all, this data pointed just to the possibility that tight aspects may be slightly stronger than wide ones. Concerning the second studied issue, the maximum orb for applying natal aspects seemed to be 1-2 degrees bigger than for separating ones; apart from this effect, there was no consistent difference in the strength of applying and separating natal aspects. A straightforward simulation procedure was applied to evaluate how much the use of noontime weakens results in two sets of data which were untimed.

[8] Tarvainen, Kyösti: On the Sun's aspects by famous Pisceans. To appear in *Correlation*.

Abstract. This research is a continuation of M. Gauquelin's and S. Ertel's studies concerning the question whether eminent persons have more aspects than expected. "Extreme case sampling" is applied to this issue by anticipating that especially eminent persons with the Sun in Pisces have more aspects to the Sun than expected. This hypothesis is based on the astrological notion that Pisces, as the last sign, is not an ambitious astrological sign. Therefore, for attaining fame,

particularly persons with the Sun in Pisces would benefit from strengthening aspects to the Sun. This hypothesis turned out to be valid in a statistically significant way ($p=0.04$) in the group of 1 580 persons with the Sun in Pisces; these individuals are found in the Gauquelins' collection of famous people. The excess of the considered major and minor aspects is 1.3 % compared to a control group formed by shuffling. The result gives some general confirmation to the workings of aspects and also to the significance of the Sun for self-expression. As a theoretical byproduct, some confirmation was observed for the tropical sign Pisces since approximately the Pisces degrees on the ecliptic were highlighted in the aspect excess.

[9] Tarvainen, Kyösti: The Moon's Nodes in the synastry of the Gauquelins' couples. *Correlation* 30(2): 27-37, 2016.

Abstract. *This research deals with the hypotheses that there are more inter-chart North Node conjunctions than expected and fewer South Node conjunctions than expected with the partner's traditional planets SO, MO, ME, VE, MA, JU, and SA. The data consist of 20 895 couples collected by the Gauquelins for their heredity studies. It turned out that the hypotheses were statistically valid for husbands, but only weakly for wives. Among the husbands, the hypotheses did hold still stronger when the husband also had an own planet at his lunar Node; for women, there was a similar weak additional effect.*

[10] Tarvainen, Kyösti: On the Astrological Polarity in Extravert and Introvert Groups. To appear in *Correlation*.

Abstract. *Based on the psychological literature, it was expected that, in the data collections of Michel and Françoise Gauquelin, there would be an excess of extraversion in these professional groups: actors, pioneer aviators, journalists, liberation fighters, musicians, politicians, and sport champions ($N = 7,482$); and an excess of introversion in scientists, medical doctors, painters, and writers ($N = 6,470$ person). In astrology, the classification of polarity is related to extraversion/introversion: the positive (masculine) signs Aries, Gemini, Leo, Libra, Sagittarius, and Aquarius have extravert qualities. Thus, the following research hypothesis arose: the total number of placements of Sun, Moon, Mercury, Venus, Mars, Jupiter, Saturn, Uranus, Neptune, Pluto, Ascendant and Midheaven in the positive astrological signs would be relatively higher in the extravert groups than in the introvert groups. This turned out to be true in a statistically significant way ($p = .02$ with an excess of 0.5%). The most powerful single astrological factor was the Ascendant ($p = .02$, excess 1.6%). For those with the Sun, Moon, and Ascendant in the same polarity, the p -value decreased to .003 and the excess increased to 3.9%. As a byproduct, strong evidence was obtained for the validity of the tropical zodiac.*

[11] Tarvainen, Kyösti: Planets are strong also according to ordinary astrology in the Gauquelins' groups. *Correlation* 31(1): 33-42, 2017.

Abstract. *The Gauquelins found so-called Gauquelin plus zones which seem to strengthen some planets of some prominent professionals. Now in this study, we study the strength of planets in the Gauquelins' data from the point of ordinary astrology. Because a multitude of strengthening factors (having different weights) has been presented in astrology, we focus here on the following factors that are perceived to be strong. Four basic categories in planetary strength are taken into account: 1) the planet's aspects and 2) house placement, 3) planets and points in the sign(s) the planet rules, 4) planets in the house(s) that correspond to the sign(s) the planet rulers. To avoid complexities of point weighting systems, only the following central factors are taken into account: among planets, SO and MO; among axes, AS and MC; among houses, the angular houses; among aspects, conjunctions. The resulting point counting system for the strength of a planet is presented in Table 1. Now according to ordinary astrology, the rulers of the 15 Gauquelin groups are expected to be strong in these groups. When using the group rulers of Rex E. Bills' rulership book and the mentioned point counting system for planetary strength, it turns out that the group rulers' strength in the 15 groups obtains overall statistical significance ($p=0.008$). Hence, planets show strength also according to ordinary astrology in the Gauquelins' data; and one can then say that the Gauquelins found additional positions which can reinforce some planets. As a byproduct, confirmation was obtained for the use of the Koch house system. Confirmation was also obtained for the 8° orb (plus 2° for SO and MO), recommended by the Faculty of Astrological Studies.*

[12] Tarvainen, Kyösti: On the estimation of aspect orbs by the computer. To appear in *Correlation*.

Abstract. *The paper first presents three methods for estimating maximum working orbs by the computer. A table gives the summary of the estimation results so far obtained in ten applications. The results are close to those recommended by astrologers. The estimation has succeeded in three major areas of astrology: natal charts (major and minor aspects, midpoints), synastry and prediction. This indicates that computer estimations can determine useful information about orbs. The orb estimations are also a proof of astrology: it is difficult for a skeptic to explain how it is possible that the computer now mechanically determines orbs that are close to those astrologers have ended up with, after two thousand years of personal experience.*

[13] Tarvainen, Kyösti: A study of the Part of Fortune on the Gauquelin data. *Journal of the Research of the American Federation of Astrologers*, Vol. 18, 2018.

Abstract. *The working of the Part (or Lot) of Fortune (PF) was studied by considering how well the PF interpretations of Schulman (1978) hold true on the Gauquelin data of twelve professional groups. Based on this book, 16 hypotheses could be set up for the PF's locations in houses and signs. They obtained statistical support with $p = 0.08$. Schulman's descriptions of the PF's aspects are very short, and no hypotheses could be set up based on these descriptions. But the importance of the PF's aspects gained statistical support in that the total amount of Ptolemaic aspects of ten planets to the PF had an excess of 0.9 % with $p = 0.02$. Also, the following three observations were made. The single formula for determining the PF worked better than the use of different formulas for the day and night births. The Koch house system, used in the study, performed better than the Placidus, Equal and Whole Sign Houses. The aspect orbs recommended by the Faculty of*

Astrological Studies were used. It could be estimated that, in this data, these were indeed working orbs, except that the additional orb for the Sun and Moon was 1°, instead of 2°.

[14] Tarvainen, Kyösti: On the validity of Jonas's theory, *NCGR Spring/Summer 2014 Research Journal*, 2014.

Abstract. *According to Eugen Jonas, women have, in addition to the normal ovulation cycle, another fertility cycle, which reaches a peak each time the transiting Sun and Moon have the same phase as at the woman's birth. The validity of this theory was studied in the case of 37 947 mothers included in the data collected by the Gauquelins for heredity studies (Archives Gauquelin, 2009). This study gave clear support to the fact that a part of conceptions is related to the mother's Moon phase. But with this data, it is not possible to discern if there really exist two distinct fertility cycles since, by some women, the ovulation cycle may be synchronized to the Moon phase at the birth. Another part of Jonas's theory is that the sex of the child is determined according to the polarity of the Moon sign at the conception. No support was found for this claim.*

Four studies are still mentioned that are not based on the Gauquelin data.

[15] Tarvainen, Kyösti: Favorable astrological factors for mathematicians, *Correlation* Vol. 29, No. 1, pp. 39-51, 2013.

Abstract. *Three groups of mathematicians are considered: 910 mathematicians using advanced methods in the research of control systems, 1849 famous mathematicians born after 1700 with a subset of 99 mathematicians who have received a Nobel-like award. It turned out that there is overall statistical significance for the favorability of 25 astrological factors, for which only the date is needed. Most of these are mentioned in the handbook by Sakoian and Acker. As a byproduct, statistical confirmation was obtained for aspect orbs that are of the order modern astrology books recommend. In addition, matching tests concerning mathematicians are studied by computer simulations.*

[16] Tarvainen, Kyösti: A study of major and minor aspects in theologians' charts, *Correlation*, Vol. 30, No. 1, 2015, pp. 29-36.

Abstract. *Robert Pelletier's aspect book mentions, in connection with 11 Jupiter aspects, that the aspect is beneficial for a clergyman, Sunday school teacher or other church occupation. On the whole, these aspects were significantly common among 6 285 Finnish theologians ($p=0.04$). Pelletier's list was systematically enlarged to include 25 Jupiter's Ptolemaic aspects to planets ME, MA, SA, NE and PL, whereby the statistical significance increased ($p=0.003$). Then it was checked whether Jupiter also works via 12 minor aspects to these five planets. It turned out that, on the whole, this was the case in a statistically significant way ($p=0.01$). For these minor aspects, orbs of 1-1.5 degrees seemed to work, except for inconjunctions 4 degrees. Additionally, it was studied whether out-of-sign aspects are as strong as other aspects, and this turned out to be the case.*

[17] Tarvainen, Kyösti: A study of midpoints in theologians' charts. To appear in *Correlation*.

Abstract. *In an earlier study, it was observed that Jupiter's Ptolemaic and several minor aspects with planets Mercury, Mars, Saturn, Neptune, and Pluto were more common than expected in the charts of 6 285 theologians. Therefore, one can expect that also midpoint configurations that include Jupiter and two of the other mentioned planets may be more common than expected. Saturn was, however, excluded from these considerations due to the midpoint interpretations in the classical midpoint book of Ebertin. The resulting 18 midpoint configurations were not more common among the theologians than in a control group formed by shuffling. But it was noticed that Jupiter, the planet most connected to religion, situated more often than expected ($p=0.01$) in the direct midpoints of the Sun and Moon, which midpoints are regarded the most important midpoints of planets. A customary 1.5 degree orb was used; and it was possible to estimate that the working maximum orb for the Sun and Moon's direct midpoints in the present data is about 1.9 degrees.*

[18] Tarvainen, Kyösti: On Lawyer's Astrological Factors, *Journal of Research of the American Federation of Astrologers*, Vol. 17, , pp. 1-10, 2017.

Abstract. *Astrological factors of lawyers are studied from two perspectives. Firstly, in his aspect book, Robert Pelletier mentions, in connection with 44 aspects, that the aspect is suitable for lawyer's profession. Among 17,765 Finnish lawyers, these aspects were not more common than expected in a statistically significant way. As a reason for this result, one can see the differences in the court system and admission procedures to the law schools in the USA and Finland. When correspondingly a part of Pelletier's aspects, chiefly martial ones, were left out, the remaining 31 aspects were common among the Finnish lawyers in a statistically significant way ($p = 0.04$). Secondly, the lawyer's profession is very mercurial like that of the journalists. The handbook of Sakoian & Acker mentions favorable astrological factors for journalists. These are mental factors related to Mercury and Gemini. It turned out that, among the Finnish lawyers, these mental factors were more common than expected in a statistically significant way ($p = 0.04$). One may expect that an excess of mental astrological factors is a common feature of lawyers in all countries.*