SUNNY DAY FOR A WEDDING

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Summary : Marriages contracted in France between 1976 and 1997 have been examined as a whole, especially according to the zodiacal longitudes of the Sun at the birth time of the spouses. From this examination, an indisputable correlation emerges. Marriages between people having the same solar longitude (more or less 30°) are more numerous than predicted. In contrast, an analysis of lunar longitudes reveals no statistically significant correlation. Very strong interrelationships appear when the marriages are distributed according to the natal signs of Mercury or Venus for the spouses.

A few years ago, a curious and candid book[1] was published in Germany which gave rise to a heated debate. Written by Gunter Sachs, the book connects statistics and astrology according to the following principle : if it is true that the zodiac correlates with human behaviour, then one should be able to statistically detect traces of this relationship in vast populations. Conducting an investigation on vast populations, however, is extremely onerous. It was Gunter Sachs' subsequent idea to approach the question in a more general way by using the huge files kept current by the civil service which might indirectly illustrate such behaviour.

Gunter Sachs started by patiently amassing an impressive quantity of various statistics including marriages, divorces, education, professions, health questions, deaths, and more. Once the data was amassed, he analysed the files data using the Chi-square independence test (see the method box below). From this analysis, he illuminated some very strange phenomena.

One of the most intriguing results concerns the 358 763 weddings celebrated in Switzerland between 1987 and 1994. According to Gunter Sachs, the solar zodiac signs play an undeniable role in nuptial choices. Some zodiac combinations, hinting at a theme involving the four elements, appear to be more frequent than others.

Recently, the Gunter Sachs experiment was replicated using French marriage statistics, employing high quality data. This article describes the replication effort and reports on complementary investigations concurrently made from other angles.

Method : Wedding distribution and the Chi-square independence test

Gunter Sachs employed a classic statistical methodology, called the Chi-square independence test, which was used often in this study. It consists of building a 144-cell table (12 signs for the husband by 12 signs for the wife) into which the entire sample is distributed. Then, a theoretical table is calculated. In this theoretical table, for each of the 144 cells, the total number of the column to which the cell belongs is multiplied by the total number of the row to which the cell belongs. The result is divided by the total number of the table. This procedure neutralizes the natal distribution disparities that naturally exist between signs[2]. For each cell, the deviation of the cell frequency from the theoretical value is calculated, squared and divided by the theoretical value. This calculation shows, for each cell, the amplitude of the shift compared to the expected value. Next, the 144 relative deviations are totaled ; this result is called the « Chi-square ». Each relative deviation is called « contribution to the Chi-square ». The risk taken by rejecting the null hypothesis is estimated from both Chi-square value and the number of cells. This probability is a measure of the global significance of the deviations.

After that, it is possible to analyse each relative deviation individually in order to estimate the influence of each combination of signs to the global deviation.

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[1] « Die Akte Astrologie » - Gunter SACHS - München, 1997

[2] For instance, Taurus is the most represented sign in the French population (+7.5% compared to the mean value), Scorpio is the least represented sign (-8.2%) - See « Population and zodiac rhythms » - Didier CASTILLE - « Les cahiers du RAMS », Paris, 1999.

French weddings statistics

In France, an organization called Insee (i.e., the National Institute of Statistics and Economic Studies) keeps current yearly computer files in collaboration with the registry offices of the town councils. These files contain data regarding births, deaths, and marriages. They are public and are generally used for demographical or sociological studies.

Registry offices files cover the years 1976 to 1997 and represent a total of 6 498 658 unions. They provide the date of birth of each spouse for every marriage. The exact time (hour and minute) of birth is not recorded.

The first step was to associate this population data with an astrological calendar to assign a solar sign to each of the spouses (see the method box, The zodiac, below).

Method : The zodiac

The astrological zodiac is a reference system that locates the Sun, the Moon and the solar system planets in space relative to the earth. The point of origin of this reference system is called « the vernal point », meaning the spring equinoctial point.

It is important to note here that the entry of the Sun in a given sign does not occur at fixed dates and hours. The following table illustrates the variability of the days when the Sun changed signs during the 20th century. For example, while in some years on March 20th at 12 noon G.M.T., the Sun was in Pisces, for other years, the Sun was in Aries. The same is true for various years on March 21st and so forth. This particular point was accommodated in this study. The 12 noon G.M.T. solar sign was attributed to each birth date.

Disparity of the days when the Sun changed signs during the 20th century (at 12 noon G.M.T.)

January, 20th	Capricorn	72				July, 23rd	Cancer	30
	Aquarius	28					Leo	70
February, 19th	Aquarius	30				August, 23rd	Leo	58
	Pisces	70					Virgo	42
March, 20th	Pisces	94	March, 21st	Pisces	13	September, 23rd	Virgo	46
	Aries	6		Aries	87		Libra	54
April, 20th	Aries	53				October, 23rd	Libra	82
	Taurus	47					Scorpio	18
May 21st	Taurus	49				November, 22th	Scorpio	73
	Gemini	51					Sagittarius	27
June, 21st	Gemini	81	June, 22th	Gemini	4	December, 22th	Sagittarius	27
	Cancer	19		Cancer	96		Capricorn	73

With this operation, 338 marriages were identified that contain at least one wrong birth date (February, 30th or April, 31st, for example). Without any other obviously erroneous data, the study population was now 6 498 320 couples. At this point, the first Chi-square test was performed.

A first test confirms the Swiss results

The independence test performed on a population of 6 498 320 marriages produced a Chi-square value equal to 470.1. With such a value, the risk taken by rejecting the null hypothesis (meaning, that there is no association between the signs of people who decide to marry) is very slight.

The columns of the following table correspond to the solar zodiacal sign of the wife, the rows correspond to solar sign of the husband. The cell that represents the cross between a column and a row presents the deviation of the cell frequency from the expected value. For example, the number of weddings celebrated between an Aries man and a Taurus woman is greater than theoretical (+175 couples). In the same way, the number of weddings between an Aries man and a Gemini woman is less than theoretical (-72 couples).

Distribution of marriages according to the spouses' solar signs

		♈	♉	♊	♋	♌	♍	♎	♏	♐	♑	♒	♓	Total
♈	Aries	934 ***	175	-72	-213	-31	-117	-173	-237	-105	-147	-59	46	564 684
♉	Taurus	-196	992 ***	64	570 *	-643 ***	114	-179	-280	-517 *	163	-259	171	582 442
♊	Gemini	288	166	1 029 ***	-159	-137	-111	-86	168	-271	-132	-119	-635 ***	565 465
♋	Cancer	-235	-291	287	964 ***	92	8	-465 *	123	-164	-164	-23	-132	565 352
♌	Leo	-141	-265	-30	-87	949 ***	146	278	-446 *	-194	-147	-45	-18	547 524
♍	Virgo	-633 ***	-80	-160	14	321	972 ***	96	66	71	-125	-325	-217	538 762
♎	Libra	-55	-85	-330	-405	201	247	922 ***	-2	57	-192	-280	-77	524 980
♏	Scorpio	-344	-316	-105	-243	-305	31	249	1 281 ***	106	-46	-335	27	494 748
♐	Sagittarius	-36	-361	91	-127	216	-374	333	-265	1 003 ***	-130	96	-448 *	497 582
♑	Capricorn	164	-182	-346	32	-179	-346	-333	-236	83	1 068 ***	387	-113	522 877
♒	Aquarius	-80	343	-58	127	-429 *	-529 *	-209	-241	-10	-46	1 059 ***	72	538 868
♓	Pisces	334	-95	-369	-474 *	-54	-41	-435 *	68	-58	-103	-97	1 323 ***	555 036
Total		561 791	581 311	571 256	565 511	548 505	540 358	526 700	496 698	498 076	517 497	537 788	552 829	6 498 320

The grey cells in this table highlight those combinations for which the actual number of marriages is greater than the theoretical number. The amplitude indicators of the contribution (the asterisks beneath a value) can be translated as follows :

The value of the contribution is :	the indicator is :	It means that the deviation is :
superior to 7.88	* * *	significant with a risk of 0.5% at the most
comprised between 6.63 and 7.88	* *	significant with a risk of 1% at the most
comprised between 3.84 and 6.63	*	significant with a risk of 5% at the most
inferior to 3.84		not significant

By more carefully examining the marriages distribution and, especially the contributions to the Chi-square, another phenomenon appears. The table presenting the deviation of the actual frequencies from the expected values shows a structure.
First, there appears to be a diagonal series of actual frequencies that exceed theoretical frequencies for weddings contracted by people born under the same solar sign. Secondly, there is a line of frequencies that are less than theoretical for people born under opposed signs.

The total of the Chi-square contributions of the 12 combinations which form the diagonal of excess observations is quite high. It reaches 296.9, or 63.2% of the Chi-square value. Theoretically, it should be 39.2 (a twelfth, or 8.3%, of the Chi-square value). The number of weddings generating this diagonal exceeds by 2.3% the theoretical number (+12 497 couples). Therefore, this particular diagonal set of frequencies can not be attributed to chance.
On the other hand, the diagonal of lower frequencies mentioned above is formed by 10 negative deviations which contribute only slightly to the Chi-square. The total of these 10 contributions reaches 12.2 (2.6% of the Chi-square) when it should be theoretically equal to 32.6. The number of weddings involved in generating this part of the diagonal is less than the theoretical number (-1 991 couples) by 0.4%.

Controls

In order to verify the previous results, another Chi-square independence test was performed on a control sample : a random selection of a tenth of the entire population.

This test, conducted on 649 831 marriages, produced a Chi-square value equal to 147.9 and permits the rejection of the null hypothesis with a risk of 5% at the most.

Here again a diagonal of excess observations appears. The number of marriages involved in the diagonal is greater than the theoretical number by 2% and the total of the 12 contributions corresponds to 34% of the Chi-square (compared to 8.3% in theory).

Therefore, the control test confirms the previous conclusion : that a greater than expected frequency of weddings occurs between people born under the same solar sign.

Special case : spouses born on the same day

One wedding out of 1000 (6 417 marriages out of a total of 6 498 320 unions) presents a intriguing special case : in these weddings both spouses were born on precisely the same day. Knowing that the number of marriages contracted between people born on the same year is 681 802 (10.5% of the whole sample), the theoretically expected number of marriages for people born on the same day is 1 867 (681 802 / 365). The actual value in this case is 3.4 times the expected value.

One of the main arguments that might be raised here concerns data reliability. Actually, we have already noticed that wrong birth dates exist in the files, despite all efforts taken to quarantee accuracy.

A number of steps exist in the document handling process before statistics are produced, including : a copy is made of the spouses' birth certificates, a registration form for the marriage is filled out with the birth dates, a copy of this information is made on a statistical form from which information is then captured by the Insee. These birth dates are therefore handled four times providing multiple opportunities for careless mistakes, such as writting the same birth date for each spouse.

This argument can not be easily verified because the Insee does not keep captured forms. Only a survey with the local registry offices could form a basis for verification.

Whether this set of marriage data is in fact real and accurate or a measure of human fallibilty when faced with these types of administrative tasks, these excess marriages draw into question the previous results and should be accounted for when further tests are performed.

An attempt to rectify the data by excluding all marriages contracted between people born on the same day is too radical, because such marriages can justifiably happen. It is preferable to weight the number of marriages contracted between people born on the same day by the ratio of the theoretical number to the actual number. In order to be as precise as possible, the ratio is calculated for each yearly file, as follows :

1976	0.39	1979	0.29	1982	0.23	1985	0.24	1988	0.30	1991	0.32	1994	0.35	1997	0.29
1977	0.30	1980	0.34	1983	0.24	1986	0.22	1989	0.34	1992	0.34	1995	0.34		
1978	0.30	1981	0.29	1984	0.23	1987	0.24	1990	0.35	1993	0.34	1996	0.27		

For example, in 1976, 291 marriages were contracted between people born on the same day. In theory, they should have been 113. The weighting for 1976, therefore, is equal to 113*100/291=39%.

A second test on a weighted population confirms the results[3]

Weighted in this fashion, the population now contains 6 493 772 marriages. The independence test performed on this population produces a Chi-square value of 295.1. With such a value, the risk taken by rejecting the null hypothesis (meaning there is no association between the signs of people who decide to marry) is very slight.

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[3]From now on, all investigations are conducted on the weighted population

Distribution according to the solar sign of the spouses
weighted sample : 6 493 772 marriages

	♈	♉	♊	♋	♌	♍	♎	♏	♐	♑	♒	♓	Total
♈	567 *	213	-36	-177	3	-85	-141	-206	-76	-115	-24	78	564 281
♉	-158 **	606	102	608 **	-607 **	148	-145	-247	-486 *	196	-222	205	582 016
♊	324	205	655 ***	-122	-102	-78	-54	199	-241	-100	-83	-602 **	565 053
♋	-199	-253	324	594 **	127	41	-433 *	154	-135	-132	12	-99	564 946
♌	-107	-229	5	-52	594 **	178	309	-416 *	-166	-117	-12	13	547 136
♍	-600 **	-46	-126	46	352	635 ***	125	94	97	-96	-293	-188	538 396
♎	-24	-52	-298	-373	231	276	593 ***	26	83	-164	-249	-49	524 623
♏	-313	-283	-74	-212	-276	59	276	960 ***	131	-18	-305	55	494 399
♐	-6	-330	121	-97	245	-347	359	-239	696 ***	-104	125	-421 *	497 251
♑	196	-149	-314	64	-148	-317	-305	-209	109	741 ***	417 *	-84	522 522
♒	-45	380	-23	162	-396	-497 *	-178	-211	19	-15	701 ***	104	538 476
♓	367	-61	-336	-441 *	-23	-12	-406	96	-31	-74	-65	987 ***	554 671
Total	561 388	580 885	570 844	565 105	548 117	539 992	526 343	496 349	497 745	517 142	537 396	552 464	6 493 772

Once again, the diagonal of excess observations is very pronounced. Even in these weighted conditions, it can not be assigned to chance. The total of the 12 contributions amounts to 136.3 (46.2% of the Chi-square) when it should be 26.6 in theory. The number of weddings involved in this diagonal is greater than the theoretical number by 1,5%(+8 329 marriages).

Controls

In order to verify the previous results, another Chi-square independence test is carried out on a fictitious population. This fictitious population is built by dividing the original file in two parts, one containing the husbands and the other containing the wives, and by creating random couples between the two groups.
The control test produces a Chi-square value equal to 119.4. This value permits rejection of the null hypothesis with a very high risk (52.5% at the most).
The diagonal of cells corresponding to the marriages contracted by people born with the same solar sign comprises only 9 excess combinations. The sum of their contributions is greater than the theoretical sum by 0.3%.

Distribution of a fictitious population
according to the solar sign of the spouses

	♈	♉	♊	♋	♌	♍	♎	♏	♐	♑	♒	♓
♈						*						
♉												
♊												
♋												
♌				*								
♍												
♎												
♏												
♐												

♑		▓	▓				▓		▓	▓	▓	▓		
♒		▓		▓		▓			▓	▓		▓	▓	
♓			▓		▓			▓			* * *			

The distribution of this fictitious population is therefore due to chance. The divergences between the actual and the theoretical values that exist for the real population do not persist in these control conditions, and therefore confirm the previous results.

Beyond zodiac signs : exploring solar sign neighbours

Relying on zodiac signs for statistical analysis now seems too broad to deepen the understanding of the astrological relationship existing between two married people, for two reasons :
First, because the deviation table presents the distinct possibility that the diagonal of excess combinations spreads to neighbouring signs. For example, while weddings between Aries spouses are more frequent than in theory, it is also true that weddings between an Aries man and a Taurus woman or between a Pisces man and an Aries woman are more frequent than in theory.
Second, because a zodiac sign is a 30° interval, it may be that this interval is too large to investigate precisely which marriages are responsible for the statistics imbalances.
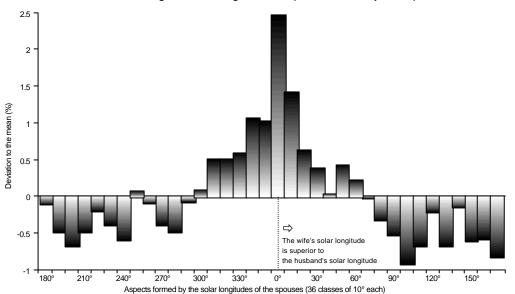
To explore the astrological relationship more precisely, the decision was made to discard focus on spousal sun signs and concentrate instead on the synastric aspect between their two Suns. Synastric aspects were calculated for each couple of the population taking the yearly weightings into account. Couples were segmented into 36 classes of 10° each according to the value of the aspect. Next, the distribution was compared to a theoretical uniform distribution and a one-way Chi-square test was performed in order to measure the global amplitude of the deviations.
The Chi-square value produced was 313.7. This value permits rejection of the null hypothesis (meaning that marriages are independant from the aspect formed by the spouses' Suns) with a very small risk of error.
14 classes out of 36 are characterized by an above theoretical frequency. These 14 classes comprise a total of 2542 419 marriages, representing a surplus of 17 064 marriages compared to the theoretical value (+0.7%).
The conclusion to be drawn from this is that the astrological interrelationship that exists between two people who decide to marry has more to do with their solar longitude proximity than with their solar sign neighbouring.
Marriages between people who celebrate birthdays within 30 (or even 60) days apart are more frequent than theoretically predicted.

Distribution of the marriages according to the aspect formed by the spouses' Suns

The wife's solar longitude is superior to the husband's solar longitude

Aspects formed by the solar longitudes of the spouses (36 classes of 10° each)

No correlation between lunar longitudes

The next investigation analyzed the weddings by both the natal Moon sign and the natal Sun sign for both spouses.

These tests were exactly modelled on the previous tests. But the Moon is fast and changes sign every 2 or 3 days. For the entire population (both women and men), a huge percentage of them (44%) were born on a day when the Moon changed signs, i.e., it was in a given sign at 0:00 a.m. and in the following sign less than 24 hours later.

This difficulty was accounted for in a partial way. Because the exact time of birth was not recorded in the files, people born on a day when the Moon changed sign were distributed in both signs in exact proportion to the relative number of hours the Moon was in each sign that day. For example, if on a given day, the Moon transited from Aries to Taurus at 8:00 a.m., people born that day were distributed one third in the class « Moon in Aries » and two thirds in the class « Moon in Taurus » since the Moon was in Aries for one third of the day and in Taurus for two thirds[4].

From the different test results, it appears that no interrelationships exist. The Chi-square values are much too weak to pretend that the distributions are not due to chance. The following table summarizes the test results:

Chi-square independence test between :	Chi-square value	Risk of error
the husband' solar sign and the wife's lunar sign	113.7	66.8 %
the husband' lunar sign and the wife's solar sign	118.4	55.0 %
the husband' lunar sign and the wife's lunar sign	83.4	99.6 %

Mercury and Venus longitudes: very strong statistical links

The conclusions are quite different concerning the results of the Chi-square independence test performed on the distribution of the weighted population according to the natal signs of Mercury for each spouse.

Distribution of marriages according to the sign transited by Mercury at the birth of both spouses

	♈	♉	♊	♋	♌	♍	♎	♏	♐	♑	♒	♓	Total
♈	871 ***	-927 ***	-392	949 ***	679 ***	-733 ***	-813 ***	249	-8	-896 ***	-62	1082 ***	535 628
♉	955 ***	803 ***	-758 ***	-419 *	652 ***	462 *	-1080 ***	-486 *	616 ***	230	-820 ***	-153	511 699
♊	79	679 ***	1292 ***	-806 ***	-329	517 *	245	-721 ***	-263	642 ***	-99	-1237 ***	514 256
♋	-1149 ***	-155	666 ***	776 ***	-649 ***	-174	1002 ***	-126	-841 ***	-170	558 **	262	503 805
♌	-524 *	-967 ***	-304	788 ***	926 ***	-470 *	52	419 *	33	-722 ***	-76	845 ***	513 190
♍	719 ***	-42	-968 ***	-70	988 ***	704 ***	-277	-24	692 ***	-320	-1096 ***	-307	535 702
♎	28	771 ***	129	-852 ***	-645 ***	962 ***	1049 ***	-602 **	-77	292	-119	-937 ***	557 728
♏	-907 ***	-303	391	209	-779 ***	-364	693 ***	705 ***	-98	-228	625 ***	58	549 321
♐	-256 ***	-1033 *	-453 ***	595 *	479 **	-573	-324	1037 ***	602 **	-794 ***	154	565 **	562 265
♑	852 ***	548 *	-913 ***	-512 *	383	-28	-946 ***	-182	703 ***	925 ***	-562 *	-270	582 412
♒	80	620 ***	693 ***	-937 ***	-820 **	599	51	-752 ***	-447 *	968 ***	572 *	-629 ***	576 744
♓	-750	6	618	280	-888	-902	346	482	-912	73	925	722	551 019

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[4]Lacking precise information, the circadian rhythm irregularities are not taken into account.

	♈	♉	♊	♋	♌	♍	♎	♏	♐	♑	♒	♓	Total
	* * *		* * *		* * *	* * *		*	* * *		* * *	* * *	
Total	539 455	517 122	509 124	502 958	518 038	542 231	555 635	547 065	565 624	583 121	569 573	543 823	6 493 772

The Chi-square value is enormous ; it reaches 1 353. The risk taken by rejecting the null hypothesis is therefore extremely weak. Moreover, the distribution table shows a sharp structure with several diagonals of surplus combinations appearing in an alternating pattern. And finally, most of the deviations are highly significant (* * *).

When the natal Venus positions of both spouses were analyzed, the independence test was also surprising.

Distribution of marriages according to the sign transited by Venus at the birth of both spouses

	♈	♉	♊	♋	♌	♍	♎	♏	♐	♑	♒	♓	Total
♈	1 660 * * *	581 * *	174	146	-330	-1 540 * * *	-37	1 118 * * *	-278	-277	-1 282 * * *	65	666 883
♉	-227	370	-226	129	63	-132	-78	-135	276	-151	181	-70	498 917
♊	-433	-79	666 * * *	577 *	28	215	-182	-593 *	-309	-82	225	-33	581 295
♋	-950 * * *	-378	349	874 * * *	734 * * *	144	99	-1 026 * * *	-344	-138	854 * * *	-218	576 709
♌	-226	-166	-91	405 *	225	307	169	-144	30	-69	-399	-38	473 008
♍	944 * * *	114	-928 * * *	-456	-128	1 204 * * *	111	422	210	-459 *	-943 * * *	-90	628 421
♎	-114	-87	45	-240	-123	266	232	248	173	8	-439 *	30	434 522
♏	-1 150 * * *	-497 *	886 * * *	228	-152	-1 137 * * *	364	1 297 * * *	43	426 *	176	-485 *	617 300
♐	-110	-16	30	-29	-324	89	-165	-231	400 *	73	274	10	448 291
♑	-356	-192	-6	-146	26	-22	-306	-0	68	405 *	311	219	457 934
♒	405	94	-856 * * *	-1 069 * * *	-92	1 039 * * *	-242	-769 * * *	-314	-56	1 068 * * *	793 * * *	646 309
♓	557 *	256	-42	-418 *	75	-433 *	36	-188	46	320	-26	-183	464 182
Total	671 654	488 839	587 934	574 014	480 273	628 318	435 219	615 708	443 177	461 124	645 183	462 328	6 493 772

The Chi-square obtained for the Venus distribution test was 622. This value permits rejection of the null hypothesis with no hesitation. Once again, the distribution table shows a structure with a large diagonal of surplus combinations. Finally, 23 cells present a highly significant deviation (* * *).

When a man marries a woman born in the same year as he, his Mercury has one chance out of two of maintaining synastric aspects of conjunction or trine with her Mercury[5]. This phenomenon is induced by the retrogradation period.
For example, during the year 2000, Mercury went back and forth in Pisces (February/March), in Cancer (June/July) and in Scorpio (October/November). Therefore, approximately half of the babies born in the year 2000 have Mercury in Water. Consequently, some decades from now, those who will get married with persons born in the same year as they will have approximately one chance out of two of marrying someone who has got Mercury in Water thereby increasing chances of a conjunction or trine relationship.
Moreover, it appears that the age gap separating the spouses is narrow. It was on average 2 years and 3 months for marriages in 1976 and of 2 years and 6 months for marriages in 1997.
Yet, the behaviour of the French regarding marriage has changed significantly in 22 years. In 1976, brides were most often 20 years old and bridegrooms 22. Today, brides are most often 25 to 26 years old whereas husbands are 26 to 27. But the age difference between bride and groom has hardly varied.

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[5] « Population and zodiac rhythms » - Didier CASTILLE - « Les cahiers du RAMS », Paris, 1999.

Consequently, it is in the constancy of this age difference associated with the demographic concentrations generated by the planetary retrogradation periods that we find the main explanation for the imbalances noticed in the marriage distribution using Mercury and Venus natal signs.

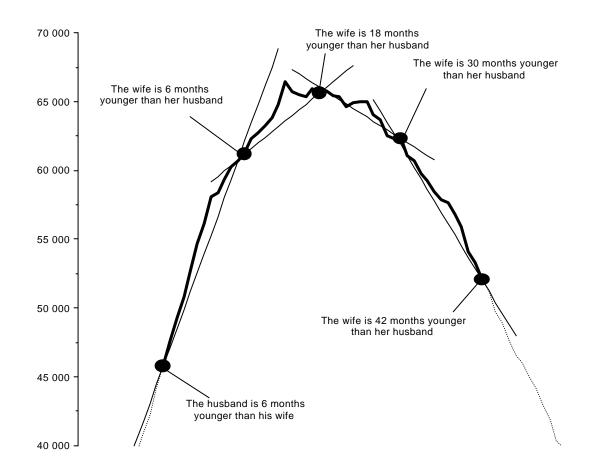| Age gap between the spouses	The husband is older than his wife	The wife is older than her husband
less than 1 year	11%	8%
more than 1 year and less than 2 years	12%	5%
more than 2 years and less than 3 years	11%	3%
more than 3 years and less than 4 years	10%	3%
more than 4 years and less than 5 years	7%	2%
more than 5 years	23%	4%

Furthermore, for any given year, the Mercury retrogradation arc is 20° from that of the previous year, which is why the diagonals visible in the distribution table according to Mercury are two signs wide. In short, the sharp imbalances of the Mercury table are principally due to marriage of people who were born two years apart at most.

The situation is a bit different for the distribution according to Venus where the divergences are less pronounced. The large central diagonal, which represents an excess number of weddings between people for whom both Venuses are at almost the same longitude, is also due to the retrogradation periods. A Venus retrogradation happens every 20 months on average and occurs again on approximately the same arc every 8 years.
In short, the couples which generate the central diagonal in the Venus table are principally composed by people born under the same retrogradation period, that is, born on the same year or 8 years apart. This last case is relatively rare.

In summary, marriages concluded between people born less than one year apart generate both of the Mercury and Venus imbalances. This situation can be compared to the breakdown according to the solar longitudes.

Breakdown of the most frequent weddings according to age difference

The wife is 18 months younger than her husband

The wife is 30 months younger than her husband

The wife is 6 months younger than her husband

The wife is 42 months younger than her husband

The husband is 6 months younger than his wife

Objective criteria

Gunter Sachs is right. Marriage is a decision that is not independent of the partners' zodiacal signs. His conclusions are confirmed by the French statistics.

The detailed analysis of the weddings registered in France between 1976 and 1997 - approximately 6 million and a half - leads to several remarks.

First, unions between people born precisely on the same day are 3 times more numerous than one would expect. This finding has no explanation and has to be confirmed : the statistical quality of the files should be tested by complementary investigations, like a specific survey, for instance.

Secondly, weddings concluded between people celebrating their birthday 60 days apart at most are more numerous than in theory. This result expands on those obtained for the zodiac signs, demonstrating that proximity of solar longitudes is more important than a similarity of signs.

The deviations observed between the actual number of these marriages and the theoretical number are indisputable. The results are made more important because the experiment was based on strictly objective criteria. First, it does not depend upon a sample but on an exhaustive population. Second, the study is not a psychological test. And third, the observation criteria do not depend on the observer's subjective valuation.

It should be noted, however, that we are clearly gazing on an ocean and have only discerned the crest of a wave in this study. It is clear that the crest is shallow but all those who will gaze again on this ocean will surely distinguish it. The conclusions seem indisputable : that such an important decision as marriage has a clear association with the date of birth of the spouses.

Thirdly, analysis of the weddings according to the signs transited by the Moon at the spouses' birth produces no notable interrelationship.

Fourthly, some very sharp statistical links appear from analysis of the marriages according to the natal zodiac signs of Mercury and Venus for both spouses. This relationship can principally be explained by the demographic concentrations generated by the retrogradation periods of Mercury and Venus and by the stability over the years of the age gap separating the spouses.

These imbalances may be due to chance but only a deepening of the experiment can confirm that conclusion. Now, this deepening appears to be rather difficult to accomplish, for two main reasons :

•First, because the Mercury and Venus longitudes depend on the longitude of the Sun. It would be risky to conduct an independence test in these conditions. A global deviation observed for the longitudes of a given planet mechanically generates deviations when the longitudes of another planet are observed. Only a global approach can be considered from the moment we are talking about cyclic motions.
•Second, the age gap which separates the spouses remains constant over the years. The husband is two years and a few months older than his wife on average. Therefore, it seems difficult to set comparisons with some theoretical uniform breakdown. One possible approach would be to reduce the population to a smaller segment, such as, for example, marriages concluded between people born less than one year apart. Surely, in this case, the difficulty would be lessened. But it would still persist because, even when the age gap is small, the husband is more often a few months older on average than his wife.

As we already discussed regarding Mercury and Venus, the age gap that separates the spouses is a major factor to explain these deviations. It also plays a great role in the distribution of marriages according to the solar longitudes. Actually, the surplus weddings are principally due to couples formed by spouses of the same age as well as to those couples in which the husband is a slightly older than his wife (from 1 to 3 years). But the most intriguing question remains : while it may be true that the observed wedding deviations are due to the age gap, it may in fact be true that the age gap is due to astrological forces - a new « chicken or egg » dilemma.

Age of the spouses at the wedding time

373 965 marriages celebrated in 1976   283 978 marriages celebrated in 1997