

Marriages of Twins to Twins

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SUMMARY

Fifty marriages of twins to twins have been studied. Most of them have the characteristics of MZ twins. All have an identical outcome of their marriages within each set. This finding and others from the literature are consistent with the idea that marital stability depends in part upon one's original "blueprint" for physical and emotional health.

Two findings in this study, and others from the literature, are consistent with the idea that similarities at the chemical level may in general tend to promote a better understanding of each other and hence more congenial relationships: (a) all but one of the twin foursomes have lived closeby; three-quarters of them share the same house, even after they have had children; and (b) there is some degree of similarity in the ABO and Rh blood groups between husbands and wives in this sample.

The stably-married twins knew each other for an average of four years before marriage, whereas the divorced and annulled ones met only a few weeks or months before marriage.

Twins married to twins are excellent subjects for marriage research: they provide built-in controls who have much in common and hence fewer uncontrolled or unsuspected variables as sources of error. This author has been interested in finding experimental evidence consistent with a *chemical theory of compatibility and marital stability*, which is not far different from the intuitive idea that "chemistry" is a fundamental factor in congeniality, by way of relationships between chemical factors and personality types. Briefly this hypothesis is that:

1) Those chemical factors which promote physical health and longevity tend to promote "marriageability" (the aptitude for marriage), presumably because of interrelationships with emotional health. The family physician should be consulted before marriage in case there may be a need for treatment or counselling.

2) Similarities at the chemical level between husbands and wives in general may tend to be conducive to compatibility and marital stability, just as such similarities in identical twins may contribute to the lifelong congeniality of many of them. It may become feasible to develop premarital screening tests based upon chemical and physiological measurements, to predict certain cases of gross incompatibility, such as extreme differences in introversion-extroversion.

3) An appreciation of the astronomical complexity of the physical structure underlying the psyche may help to make more understandable the idea that short courtships represent an inadequate sample of a lifetime together.

If there is any substantial basis for the first hypothesis, then twins, who have half or all of their "coding" molecules in common and who oftentimes have similar health histories, should have similar propensities for getting married and staying married. An analysis of the data from previous studies shows striking similarity in the marriage histories of twins, even if they have been raised apart (see Tables I-III). Furthermore, marriages of twins to twins should be expected to have a similar outcome within each set. This has been found to be so in the present study. Fifty marriages of twins to twins were ascertained through wedding publicity and twins' associations; all were traced, and the marriages were found to have an identical outcome within twinships: both marriages are intact (unless broken by death), or both have ended in divorce or annulment (see Tab. IV and case histories). This 100% concordance is highly significant.

Suggestive evidence for the second hypothesis is the similarity in blood groups between husbands and wives (see Tab. V). If this relationship is confirmed in a larger number of couples and in a larger number of the thirty or so most useful blood groups and serum proteins (Race and Sanger, 1969; Giblett, 1969), then it should be of interest to try to determine whether some hypothesized relationships between blood groups and personality factors may be involved, and whether similarities in anthropological types may be a factor. (About a quarter of the twin foursomes report the same country of origin of some of their forbears). There is no reason why assortative mating should not be reflected at the level of blood groups, as it seems to be in many other measurable characteristics.

A number of other research findings support these ideas.

MARRIAGEABILITY

It is well known that married people as a group are healthier than the unmarried: the former have only about half the death rate of the latter (Statistical Bulletin, 1957; Carter and Glick, 1970).

Health data on twins discordant for matrimony should be helpful in analyzing the relationship between matrimony and health. The data so far available suggest that the less strong twin may (in some cases) stay single (Shields, 1962) but that single status *per se* is not necessarily a health hazard. There is one pair of twins in the present study who are now discordant for matrimony (after both had annulments from marriages with twins), the J's. They have similar medical histories, but the unmarried twin has retired early and checks many symptoms (38%) on the Cornell Medical Index Health Questionnaire; he is still unmarried in his fifties. Kallmann described six pairs of senile MZ twins discordant for matrimony (1953) and two pairs discordant for marital stability (1956 a, b). These twins have had quite similar health histories, blood chemistries, mental measurements and lifespans. Among the twins discordant for matrimony are two sets of women, one pair still alive (at the time of writing) at about 90, and another pair who died at 92 and 94. Evidently, marital status had no appreciable effect on their lifespan or on that of the others, according

to data kindly furnished by Dr. Lissy Jarvik. Lifespan differences in MZ twins who die of natural causes are not large: about three years among those in the older age brackets (Kallmann, 1962). Perhaps a common factor behind longevity and marital stability is a good "molecular blueprint". Nearly all centenarians are married: 98% in a study by Dunbar (1954).

Married people as a group have better mental health than unmarried people; in fact, single status has been proposed as a prognostic indicator in schizophrenia (Klein and Klein, 1968). In a study of MZ twins discordant for schizophrenia, marital status differentiated between schizophrenics and nonschizophrenics better than any of the other psychological or biological variables (Pollin and Stabenau, 1968). Since pharmacological treatments have become standard practice, marriage rates of schizophrenics have increased (Erlenmeyer-Kimling, 1968).

There is some preliminary evidence of a possible relationship between the possession of very rare blood-group antigens and incarceration for felonies: scarcely the most favorable background for family life (Mary L. Garris, unpublished observations).

Over a hundred common medical conditions may give rise to psychological disturbances and marital troubles; for example, thyroid imbalances, diabetes, metabolic errors, chromosomal aberrations, and nutritional deficiencies (Walker, 1967; Field, 1969; Heller, 1969; Whybrow et al, 1969).

Most of the stably-married twins in the present study report good health, and check only a moderate number of symptoms or conditions on the health questionnaire. More cogent evidence for our hypothesis is the similarity in health histories between twins and the identical outcomes of their marriages.

Recently an attempt has been made to compile some common "contraindications to marriage" (Greene and Lustig, 1968). Colleges have to have entrance requirements to curtail dropouts — why not matrimony? Actually, a premarital blood test is required in most states. Would it be too much to ask that a checkup with the family doctor be an added requirement? It could be arranged together with the blood test, and would provide an opportunity for prompt treatment and counselling when needed.

COMPATIBILITY

The similar chemical makeup of twins, especially MZ, may be a fundamental factor in the close bonds often found between them (Mowrer, 1954; Lindeman, 1969). In this study, all but one foursome have lived closeby most of the time; and three-quarters of them share the same house, even after they have had children. Most of these twins say that they couldn't get along without each other. The L family says, "Who needs a marriage counsellor when you have a twin handy?". The congeniality between these twins may help to hold their marriages together. Only six of the marriages have broken up (12%).

Similarities in a number of physiological characteristics have been reported as being associated with more harmonious relationships, for example, similar alpha-waves of the EEG (Walter, 1963), and similar body builds (Sheldon and Stevens, 1942).

Similarity in certain normal and abnormal personality types may be a more stable combination than "mixed marriages" of opposite types, such as an extreme introvert with an extreme extrovert, or a schizoid with a manic depressive (Jacobson, 1956; Kreitman, 1968). Perhaps physiological and chemical correlates of introversion-extroversion, or cycloid vs. schizoid, might be found to be more similar in long-married couples; and this should be worth investigating (Eysenck and Eysenck, 1967; Pfeiffer, 1970; Winokur et al, 1970).

There may be a logical basis for similarities in blood groups of marriage partners if there are associations or linkages between blood groups and normal and abnormal personality types, as have been proposed (Cattell et al, 1934): for example, between blood type O and nonsecretor character, or Lewis-a, and the type predisposed to ulcers (Masters, 1967; Clarke, 1969); or between a (hypothesized) X-linked gene situated between the X_g blood-group gene and the color vision loci, and affective disorders (Kaplan and Lynch, 1945; Winokur et al, 1970).

COMPLEXITY OF THE PROBLEM

People are incredibly complex, starting life with giant coding molecules carrying instructions equivalent to the amount of information in an encyclopedia. Then we record countless impressions in some ten billion or more brain cells. Superimposed on this complex structure of the psyche is a basic duality brought about by acquiring two sets of chromosomes and by learning two sets of values from our parents. During courtship, each partner automatically displays the most charming facets of his personality, just as a chameleon displays adaptive coloring. Thus, marriage may present startling revelations of each other's character (Gide, 1953). Adult status and lengthy courtships tend to reduce the speculative element in matrimony (Girard, 1964).

The stably-married twins knew each other for an average of four years as a result of meeting at twins' clubs, whereas the divorced and annulled ones met only a few weeks or months before marriage. One may wonder why children are not "common interests enough", but there are divorces on record after as many as 18 minor children! If a premarital screening method could be developed to quickly determine certain high-risk combinations or individuals, then some saving of time could be effected, and put to use for more likely prospects. Twin studies should be helpful in clarifying the many interrelated variables affecting marital stability and happiness. Surely, if our country can solve the intricate problems of space flight, we can bring our scientific skills to bear on the equally challenging task of improving our way of life on this planet.

Tab. I. Marital status of twins raised together

| Pairs | MZ pairs | | DZ pairs | |
|--------------|----------|-----------------------|----------|-----------------------|
| | Observed | Expected ^a | Observed | Expected ^b |
| Both married | 49 | 46 | 47 | 44 |
| Both single | 4 | 1 | 4 | 1 |
| Discordant | 7 | 13 | 9 | 15 |

SOURCE: Kallmann, 1953. Note that these twins were unselected, hence there is not the bias of ascertainment which has been a criticism in his schizophrenia studies (personal communication).

^a On the basis of 105/120 married. Significance: $P < 0.01$.

^b On the basis of 103/120 married. Significance: $P < 0.02$.

Tab. II. Marital status of MZ twins raised apart

| Pairs | Shields ^a | Juel-Nielsen ^a | Newmann ^a | Small studies ^b | Total | Expected ^c |
|-------------------------------|----------------------|---------------------------|----------------------|----------------------------|-------|-----------------------|
| Both married (or widowed) | 33 | 9 | 8 | 5 | 55 | 47 |
| Both single (or unmarried) | 4 | 1 | 3 | 3 | 11 | 3 |
| Discordant for marital status | 3 | 2 | 0 | 2 | 7 | 23 |

^a Reviewed by Shields, 1962.

^b Muller, 1925; Lange, 1931; Rosanoff et al, 1937; Kallmann, 1938; Craike and Slater, 1945; Burks and Roe, 1949; Lindeman, 1969.

^c Significance: $P < 0.0001$.

Tab. III. Marital stability of twins raised apart

| | Divorces | |
|---|----------|-----------------------|
| | Observed | Expected ^a |
| Neither pair divorced (7 pairs, 15 marriages) | 0 | 3.3 |
| Both divorced twice (1 pair, 6 marriages) | 4 | 1.3 |
| Discordant for divorce (1 pair, 2 marriages) | 1 | 0.4 |

SOURCE: Juel-Nielsen, 1965.

^a On the basis of 5 divorces/23 marriages. Significance: $P = 0.01$.

Tab. IV. Marital stability of twins married to twins

| | Observed | Expected ^a |
|--|----------|-----------------------|
| Marriages unbroken in either couple of set | 44 | 38.7 |
| Marriages both broken within sets | 6 | 0.7 |
| Marriages in discordant sets | 0 | 10.6 |

^a On the basis of 12% broken marriages and 88% intact. Significance: $\chi^2 = 50$; $P < 0.0001$.

Tab. V. Similarity in blood groups between marriage partners

| | Observed | Expected ^a |
|---|----------|-----------------------|
| Couples with the same ABO and Rh type | 23 | 11.4 (28.5%) |
| Couples differing in ABO <i>or</i> Rh type | 13 | 22.3 (55.8%) |
| Couples differing in ABO <i>and</i> Rh type | 4 | 6.3 (15.7%) |

^a On the basis of white population phenotypes: type O, 45%; type A, 41%; type B, 10%; type AB, 04%; Rh positive, 85%; Rh negative, 15%. Significance of differences between observed and expected values calculated from the numbers of foursomes, whose blood types are independent, half the numbers in the table: $P < 0.02$.

APPENDIX ON TWIN MATERIAL

METHOD OF COLLECTION

A majority of the twins were found through an organization which has been collecting a list of twins married to twins in this country and abroad. One set was referred by the author of a twin study, and the remainder through wedding publicity. Two families required a diligent search: the I's and J's, who have a common bond in that the Mrs. I's remarried and became the Mrs. J's; thus, there are 49 pairs of twins in the 50 marriages. Letters with questions were sent to the twins, followed by telephone calls. One family was kindly contacted by Dr. Lissy Jarvik. One foursome has been visited in person and other visits are planned.

Bloodtyping was done on fresh venous blood where good facilities were available nearby: i.e., at the Ortho Research Foundation in New Jersey and the Blood Grouping Laboratory in Boston. Other samples were oxalated and airmailed to author, then typed at the University of California at Los Angeles Bloodbank or at a commercial laboratory. A few families sent records only of ABO and Rh types from the armed services or maternity hospitals. A large proportion of the twins are tentatively thought to be identicals, having

been mistaken for each other frequently, even by family members, and (except for the O foursome) having the same blood groups among those tested, including ABO, Rh, Duffy, Kell, Kidd, Lewis, Lutheran, MNSs, and P (see Table). (In a study by Hauge et al, 1968, 170 out of 171 twins raised together who were mistaken for each other were found to be alike in their blood groups and in other criteria used to classify identical twins). Most pairs have the same eye color, and color and curliness of hair, as verified by colored snapshots and hairclippings; heights the same or within about 2 inches, similar health histories and phenylthiocarbamate tasting ability. Among reasons for an apparent preponderance of identical twins are that identical twins may be more likely to have similar tastes in mates. Also, since identicals like to do things together, they tend to meet *pairs* of twins (often at twins' clubs). A double wedding presents an opportunity to continue to share their home with their twin partners. The twins are a fairly representative cross-section of socioeconomic backgrounds, ranging from farmers and laborers to professionals. A majority of the twins have had only a high-school education; three pairs had only elementary schooling, and about a third have had college and professional training (see case notes below).

CASE NOTES

The A's married in 1949 after two-year courtships (brides 25, grooms 26), and lived next door to each other or nearby for eight years. The men are engineers. Both couples describe their marriages as happy.

The B's had a double wedding in 1958 after six-month courtships (brides 22, grooms 28). They have been living together congenially with their children: seven altogether. The husbands are college graduates and are in business together. They attribute the success of their living arrangement to their being identical twins: "We all understand each other and are very compatible".

The C's had a double wedding in 1954 after nearly one-year courtships (brides 21, grooms 25). They have been living together, and the children address both couples as parents, though they can tell them apart better than others can. The husbands have been working together in farming and construction. Their living arrangement has worked out well: they pool their bank accounts and cars and solve family matters by voting.

The D's had a double wedding in 1952 after four-month courtships (brides 31, grooms 39), and lived in adjoining houses on a farm. They divorced after eleven years, with identical grounds and bitterness. The men have remarried and continue to live together. The former wives are teaching school and share a home with their children.

The E's had a double wedding in 1966 after causing many double takes on double dates for four years (brides 22, grooms 27). They live in a two-family house. The men are department head and foreman in the same company; the wives are registered nurses. "As far as we are concerned, we couldn't have picked more compatible mates". They wouldn't swap mates with their twins!

The F's had a double wedding in 1943 after three-year courtships (brides 23, husbands 30). They lived together for eight years, sharing a bank account, then built nearby houses, doing most of the work themselves. The men farm together and do carpentry; the wives formerly taught school. They all get along well together but lay stress on their individuality.

The G's had a double wedding in 1946 after half-year courtships (brides 25, grooms 24). The men created so much confusion at work that they had to be put into different buildings. They are telephone technicians. A Navy doctor could not believe he was not

examining the same man twice. The two couples have been living together congenially the whole time.

The H's had a double wedding in 1959 after three-month courtships (brides 32, grooms 29). They lived together while building a two-family house (in Europe). They all work together in a nursery and in an organization of twins in medical research.

The I's had a double wedding privately in 1934 and publicly in 1935 (both sets were then 22). The Mrs. I's had advertised for twin husbands so that they could live together. In 1937 the wives sought a divorce from their husbands, who were away much of the time with the Marines. Then the Mrs. I's married another set of twins, the J's, but got annulments and returned to the I twins; finally completed their divorces in 1939. All four remarried. Now one of the women is widowed and the other divorced, and they are living together. One Mr. I reports that he is now with his sixth wife and the other is getting married for the fifth time (second and fourth to the same woman). The latter Mr. I has angina pectoris and the other twin says that he was advised by his doctor to live it up, for he might not last the year. That was about fifteen years ago. He threw out his tranquillizers and lost no time studying nutrition. His gray hair resumed its natural color and now he can be distinguished from his twin. The four I twins have remained on amicable terms.

The J's married the Mrs. I's in a double wedding in 1937 after answering their advertisement for husbands, but they met only two weeks earlier (brides 24, grooms 31). They all lived together for about a month and then got annulments. There was some disparity in their education: the wives had two and four years of college but the Mr. J's had had to go to work after elementary school. The men both have ankylosing spondylitis of the entire spine and aortic insufficiency. The unmarried Mr. J. retired early; he checked 38% of the symptoms in the health questionnaire as compared with 18% by his twin. The Mr. J's have remained together along with the second wife of the one, and a stepdaughter.

The K's had a double wedding in 1941 after one-year courtships (brides 19, grooms 35). They lived together for four years, then nearby. All of them had worked since elementary school. Nine children between them didn't prevent the wives from helping to drive tractors on the family farm: "This will tell you why we didn't have time to fight!"

The L's had a double wedding in 1919 after knowing each other for eight years (they were all 24). They had had a little trouble when they first met telling each other apart. The husbands are veterinarians. For some years they all went into show business as a quartet. They lived together happily, owning everything jointly. The Mrs. L's never objected to their husbands going off on trips, for they had each other. The Dr. L's can interchange eyeglasses and all clothes.

The M's met at a twins' convention in 1948 and had a double wedding in 1950 (brides 24, grooms 23). They lived in adjoining houses on a ranch for one year and a half. Since then one couple has pioneered in ranching in a subarctic climate. Mrs. M worked in an office in a distant city one winter to make ends meet while the husband cared for three sons and the ranch. They have educated their six children at home by correspondence courses. They are devoted to each other and each credits the other with the success of their marriage. Their only regret is missing their twins.

The N's had a double wedding in 1966 after four-year courtships (brides 22, grooms 23). The men are chiropractors. The couples live in adjoining apartments and report that they are happily married.

The O's had a double wedding in 1947, after having known each other for six years

(brides 23, grooms 27). The men worked together in a manufacturing company. The two couples lived congenially in a duplex or next door for twenty years.

The P's had a double wedding in 1951 after two-year courtships (brides 20, grooms 25). Both sets have had university training. The men are executives in business and government, and do some lecturing. The couples live apart but meet for vacations.

The Q's had a double wedding in 1937 after knowing each other for seven years (brides 21, grooms 24). None of them could get along without his or her twin. They all work together in their own store and have no difficulty in dividing the tasks — each sets about doing whatever needs to be done. They built a beautiful home on 18 acres, an example of what can be achieved by pooling resources.

The R's had a double wedding in 1947 after knowing each other for twenty-five years (brides 28, grooms 29). The wives got the same grades even through college, and taught in the same school. The men were in the Navy for twenty years and are now managers in business concerns. They have been living in identically-furnished adjoining houses. "It's fun being twins, we think".

The S's had a double wedding in 1961 after knowing each other since childhood (brides 19, grooms 20). The clergyman who married them took special precautions to identify each one. They lived together until they had children (they have different child-rearing practices), then moved to within visiting distance. "We do everything together; we are very close".

The T's met in 1948 and married in 1949 (brides 19, grooms 26). The men received the same grades through college, served in the Army together (one refused a promotion to avoid separation), and then worked in the same electronic company. The women also had been inseparable and were fortunate to marry twins so that they could all live together, along with ten surviving children between them.

The U's married around the late 1930's and have been living together since then (brides in their early 20's and grooms in their late 20's). They have taken part in several identical twin studies, and one couple has identical twin daughters.

The V's had a double wedding in 1963 after three-year courtships (all were 20), and shared a home for two months; since then they have been living on the same street and work on a farm together. They report happy marriages and similar reactions to adjustment problems in both couples.

The W's met in school and had one-and-a-half- and two-and-a-half-year courtships: they married in 1919 and 1920 (brides 22 & 23, grooms 21 & 22). The men were oil company executives. The couples have lived closeby most of the time. They went on a cruise to celebrate their 50th wedding anniversaries. They visited this author, who could not tell either set apart. They are a congenial family.

The Y's married in 1939 and 1940 (brides 20 & 21, grooms 21 & nearly 22). One Mr. Y was a teacher but both are in business now. The family doctor believes the men are MZ, the wives DZ twins. The Mrs. Y's do not have the close feelings for each other that the other twins in this study do.

The Z's had a double wedding in 1953 after four-year courtships (brides 18, grooms 21). They have lived within a mile of each other and worked together at farming and business. Both marriages have been troubled by illnesses and by the husbands' depressions, which resulted in a fatal gunshot wound in one Mr. Z and in hospital treatment of the other; nevertheless, they have been helpful in this research and hopeful that it may do some good.

Table. General data on twin families (twins married to twins)

| Family | Years married ^a | Children of each couple | | Health | | | | | | Zygoty | | | | | |
|--------|----------------------------|-------------------------|---|--|----|----|----|----------------------------|-------------------------|---|----|------------------|-----|---|-------------------------|
| | | | | Conditions on health questionnaire (%) | | | | Conditions in common | | No. of blood group systems ^b | | PTC ^e | | Other characteristics | |
| | | | | I | II | ♂ | ♀ | ♂ | ♀ | ♂ | ♀ | ♂ | ♀ | ♂ | ♀ |
| A | 21 | 3 | 4 | 11 | — | 7 | 13 | kidney stones | varicose veins + 4 oth. | 10 | 10 | +/- | +/- | | |
| B | 12 | 3 | 4 | 3 | 6 | 7 | 11 | no ser. illn. | 8, none serious | 10 | 10 | — | ++ | | |
| C | 16 | 1 | 1 | 3 | 5 | 7 | 8 | glasses | hypertension + 7 oth. | 9 | 9 | — | ++ | | |
| D | 11 ^c | 2 | 2 | — | — | — | — | weak wrists | uncooperative | 6 | 2 | ++ | | | |
| E | 4 | 1 | 2 | — | — | — | — | “good health” | orthodontia | 2 | 2 | — | ++ | ob. reports all MZ | |
| F | 27 | 4 | 4 | 6 | 6 | 4 | 15 | glasses + 3 oth. | gynecol. + 2 oth. | 5 | 5 | ++ | + | | |
| G | 24 | 2 | 2 | 6 | 7 | 5 | 6 | indist. by M.D. | glasses + 5 oth. | 7 | 7 | — | — | red hair | |
| H | 11 | 1 | 2 | 1 | 1 | 2 | 3 | food allergies | appendectomy + 2 oth. | 9 | 9 | — | ++ | | |
| I | 6 ^c | 0 | 0 | 1 | 5 | 4 | 12 | malnutrition | glasses + 3 oth. | 6 | 6 | | | | |
| J | ¼ ^c | 0 | 0 | 18 | 38 | 4 | 12 | spondylitis + 24 oth. | glasses + 3 oth. | 6 | 6 | ++ | | | |
| K | 29 | 4 | 5 | 1 | 3 | 6 | 11 | glasses + dentures | glasses + 3 oth. | 6 | 6 | — | — | | |
| L | 49 ^d | 51 | 0 | 0 | — | — | — | gout | cholecystectomy | 2 | 2 | — | | 12 trophies for most identicals | |
| M | 20 | 5 | 6 | — | — | — | — | appendectomy | myopia | 6 | 6 | ++ | ++ | | |
| N | 4 | 0 | 0 | 5 | 6 | 9 | 9 | high metab. + 7 oth. | hay fever + 10 oth. | 10 | 10 | + | ++ | red hair | |
| O | 20 ^d | 23 | 1 | 2 | — | — | 3 | hernia, allergy same teeth | none on quest. | 4 | 9 | | | | |
| P | 19 | 1 | 1 | — | — | — | — | died + glasses | arthritis | 2 | 2 | | | red hair, green eyes | |
| Q | 33 | 2 | 3 | 2 | 2 | 2 | 2 | glasses | glasses | 6 | 6 | ++ | ++ | | |
| R | 23 | 1 | 1 | — | — | — | — | “good health” | “good health” | 1 | | | | same height red hair, indisting. | |
| S | 9 | 2 | 2 | — | — | — | — | “good health” | history of anemia | | 2 | | | same height indisting. | |
| T | 5 ^d | 21 | 4 | 7 | — | 6 | 11 | 14 | hepatitis + 16 oth. | 2 | 10 | — | | indisting. classed MZ in previous studies | |
| U | 41 | 1 | 2 | — | — | — | — | age ∞ 70 | uncooperative | | | | | | |
| V | 7 | 2 | 2 | 6 | 8 | 16 | 17 | leg cramps + 4 oth. | headaches + 19 oth. | 9 | 9 | — | + | | |
| W | 50 | 51 | 3 | 4 | 5 | 7 | 4 | 4 | nocturia + 2 oth. | hypertension + 2 oth. | 8 | 8 | + | ++ | |
| Y | 30 | 31 | 2 | 2 | — | — | — | — | “good health” | “good health” | | | | | classed by Doctor MZ DZ |
| Z | 13 ^d | 17 | 2 | 5 | — | 15 | 25 | — | depression glasses | | 10 | | | green eyes, indisting. | |

^a Up to 1970, unless otherwise specified (divorce or annulment, death).

^b All identical in cotwins, except for the Mrs. O's differing in 4, and the Mr. O's in 1, blood group systems.

^c Divorce or annulment.

^d Death of one twin.

^e Taste for PTC paper: ++ bitter; + slightly bitter; — no taste.



A



B



C

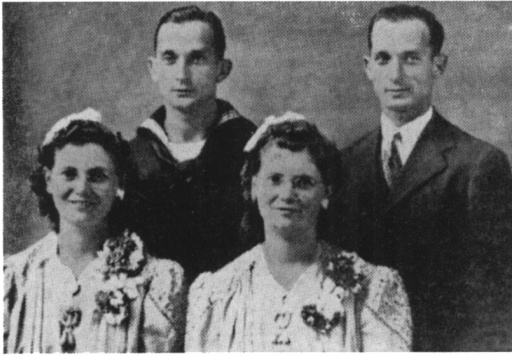


D



E

Plate 1. Families A, B, C, D (second row from the bottom), and E



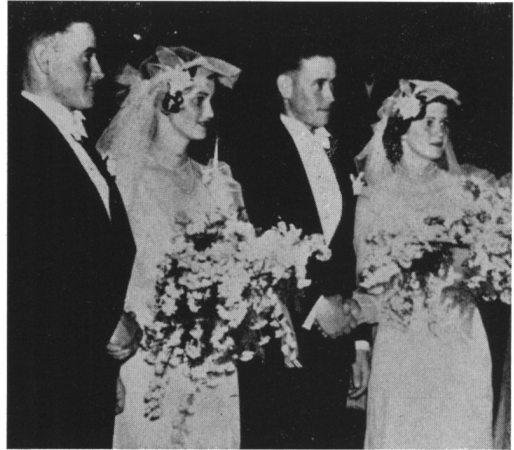
F



G



H



I



J

Plate 2. Families F, G, H, I, and J



K



L



M



N



O



P



R



S



Q



T

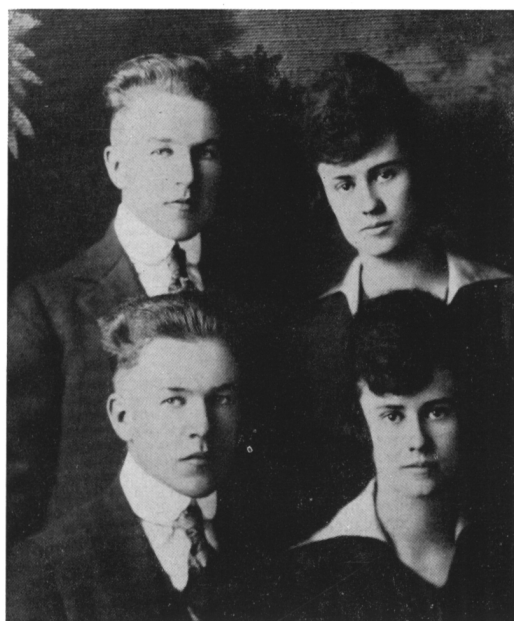
Plate 4. Families P, Q, R, S, and T



U (from Scheinfeld, 1965)



V



W



Y



Z

Plate 5. Families U, V, W, Y, and Z

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RIASSUNTO

Sono stati studiati 50 matrimoni di gemelli con gemelli, la maggior parte dei quali hanno le caratteristiche dei gemelli MZ. Il risultato del matrimonio risulta sempre identico. Questa ed altre indicazioni della bibliografia si accordano con l'idea che la stabilità nel matrimonio sia in parte determinata dalle proprie caratteristiche fisiche e mentali.

Due risultati di questo studio ed altri della bibliografia si accordano con l'idea che somiglianze di carattere clinico possano portare in generale ad una migliore comprensione reciproca e, quindi, a rapporti più congeniali: (a) tutti i quartetti gemellari, eccetto uno, vivono fianco a fianco; $\frac{3}{4}$ di essi nella stessa casa, anche dopo aver avuto dei figli; (b) vi è un certo grado di somiglianza nei gruppi sanguigni ABO ed Rh fra mariti e mogli.

I gemelli stabilmente sposati si sono conosciuti in media quattro anni prima del matrimonio, mentre le coppie divorziate (o con annullamento) si sono conosciute soltanto poche settimane o pochi mesi prima del matrimonio.

RÉSUMÉ

Cinquante mariages de jumeaux avec jumeaux ont été étudiés. La plupart d'entre eux ont les caractéristiques des jumeaux MZ. Le résultat du mariage est toujours concordant. Ce résultat et d'autres résultats de la littérature concordent avec l'idée que la stabilité du mariage dépende en partie des caractéristiques physiques et mentales.

Deux résultats de cette étude, ainsi que d'autres de la littérature, sont aussi en accord avec l'idée que des similarités au niveau clinique puissent en général faciliter la compréhension et le rapport mutuel: (a) toutes les familles de quatre jumeaux, sauf une, vivent à côté; les $\frac{3}{4}$ aussi dans la même maison, même après avoir eu des enfants; (b) il existe un certain degré de similarité dans les groupes sanguins ABO et Rh entre maris et femmes.

Les jumeaux dont le mariage est stable se sont connus en moyenne quatre ans avant le mariage, tandis que les couples qui ont divorcé, ou dont le mariage a été annulé, se sont connus seulement quelques semaines ou quelques mois avant le mariage.

ZUSAMMENFASSUNG

Untersuchung über 50 Ehen zwischen zwei Zwillingspaaren, von denen die meisten EZ-Merkmale aufweisen. Der Ausgang der Ehen war jeweils immer identisch. Diese Beobachtung und andere Schrifttumserhebungen stimmen mit dem Konzept überein, dass die Stabilität einer Ehe zum Teil durch die physischen und geistigen Eigenschaften der Partner bedingt sei.

Zwei Ergebnisse dieser Untersuchung und andere aus der Literatur stimmen mit dem Gedanken überein, dass klinische Ähnlichkeit allgemein zu besserem gegenseitigem Verständnis und somit zur Herstellung geistesverwandterer Beziehungen führen: (a) alle Zwillingquartette, mit Ausnahme von einem, wohnen direkt Tür an Tür; $\frac{3}{4}$ davon auch nach der Geburt der Kinder in derselben Wohnung; (b) es besteht ein gewisser Ähnlichkeitsgrad zwischen Mann und Frau bei den Blutgruppen ABO und Rh.

Die Zwillingpaarlinge, die in beständiger Ehe lebten, hatten sich im Durchschnitt schon vier Jahre vor der Ehe, die Zwillingpaare, deren Ehe geschieden oder als ungültig erklärt worden war, hingegen erst wenige Monate oder gar Wochen vor der Heirat kennengelernt.

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