Matrimonial Networks of the French Jewish Upper Class in Paris 19th century – 1950.

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A "European" Population

A cursory look at the genealogies of a number of upper class Parisian Jewish families of the late 19th century reveals a heavy interweaving of matrimonial ties between a group of families of French (Lorraine, Alsace, Southwest and Provence) and foreign (German-speaking, Austro-Hungarian and Russian Empire) origins. The latter, moreover, often have numerous ramifications in several European cities.

To illustrate this point, take for example the marriages of the children of Parisian notable Emile Fould (1803-1884). He was the son of Abraham Fould and Babette Oulif. He was a first cousin of Achille Fould, minister of finances under Napoleon III, himself the son of Berr Léon Fould, brother of Abraham, and founder of Fould Bank. Emile Fould in 1832 became one of the first Jewish notaires (solicitors) in Paris[1]. His firm became so successful that "it handled not only most of the legal business involving Fould Bank, Fould-Oppenheim, Crédit Mobilier, etc., but also the majority of business of the Jewish community." (Barbier 1991, 203). In 1836, he married Palmyre Oulmann, native of Lorraine. The couple would have five children, among them three girls: Juliette, Berthe and Emilie Gabrielle; and two sons: Paul and Alphonse. All five would marry into the Parisian Jewish high society.

(1) Paul Fould (1837-1917) was counsel of the *Conseil d'Etat* who in 1862 married Eve de Gunzburg, daughter of Joseph de Gunzburg and Rose Dinin. The Gunzburgs were a Russian family and Joseph de Gunzburg was the father of Horace de Gunzburg, who was one of the founders of the ORT. One of their three daughters married a Catholic noble called Henri Roussel de Courcy, while the two others would marry into the Jewish upper classes from the East and Southwest, respectively. In 1883, Louise married Emile Salomon Halphen, one of many great-grandsons of Salomon Halphen and in 1888, Suzanne Fould wed David Raoul Gradis of the Bordeaux shipping and trading family.

(2) Juliette Fould (1839-1912) married Eugène Pereire, son of Isaac Pereire and Laurence Fonseca, in 1857. Originally from Bordeaux, Isaac Pereire was, with his brother Emile, the founder of Crédit Mobilier and one of the important players of the Second Empire French economic life (Autin 1984; Stoskopf 2002, 273-288). Their eldest daughter married Salomon Halfon, member of a Roumanian family then residing in Paris. Salomon Halfon would later become vice-president of the *Compagnie Générale Transatlantique*. Marie Herminie, the youngest daughter, married Jules Halphen, descendant of Salomon Halphen. He was a cousin of Emile Salomon, the husband of his cousin Louise.

[1] The others were Armand Aron and Armand Halphen.

(3) The second daughter Berthe Fould (1843-1927) wed the banker Charles Weilsweiller, with whom she had nine children. The Weisweillers were originally from Frankfurt. Charles's uncle represented the Rothschilds in Madrid. Two marriages are of note among the children of Charles and Berthe Fould. Jeanne Weisweiller wed Jacques Helbronner, member of the *Conseil d'Etat*, in 1899, the latter of a German family. Her brother Arthur married Betty Deutsch de la Meurthe, daughter of Henry Deutsch de la Meurthe, who founded the petroleum refining industry in France, and Marguerite Ida Henriques-Raba.

(4) The second son of Emile and Palmyre Fould, Alphonse Fould (1850-1913), first entered the *Ecole Polytechnique* before becoming an army officer. He would leave the military soon after his marriage in 1874 to Fortunée Dupont, daughter of Myrtil Dupont and Elisa Ratisbonne. Elisa Ratisbonne was the daughter of Jacques Ratisbonne of the Ratisbonne Bank in Strasbourg. Myrtil Dupont was an ironmaster near Metz, in the Moselle region, who would take his son-in-law into business with him[2]. The company took the name *Aciéries de Pompey* in 1898 (Barbier 1991). Alphonse's children married within the business milieu of essentially Jewish families. In 1900, René married Esther Lazard, daughter of Simon Lazard, one of the founders of the Lazard bank. That same year, Charles married Mélanie Kauffmann of a family of jewelers from Cassel, related by marriage to the Goldschmidt and Königswarter families. Maurice's first wife was Thérèse Oulmont, from Eastern France. Finally, Hélène Fould married Paul Helbronner, an engineer, and the brother of Jacques Helbronner, the husband of her cousin Jeanne Weisweiller.

(5) Emile Fould's third daughter, Emilie Gabrielle (1855-1935) married Henri Henriques-Raba in 1879. Henri's cousin was Marguerite Raba, wife of Henry Deutsch de la Meurthe, himself the father of Betty, wife of Arthur Weisweiller, whose mother was Berthe Fould. Their eldest daughter Jeanne married Paul Alphandery, who was academic director at the *Ecole Pratique des Hautes Etudes* and a member of a prestigious provincial Jewish family. Their youngest son Marcel married Elisabeth Hertz, herself likely a member of a German family.

What conclusions can be drawn from these examples? Firstly, the frequency of the unions between members of families from the East and Southwest (Pereire, Raba, Gradis). The separation between the Ashkenazy and Sephardic worlds does not exist at the level of the elite classes. Moreover, the multiplicity of links to "foreign" families (Halfon, Helbronner, Weisweiller): the alliances were entered into without the country of origin or even residence operating as a handicap. Finally, the same families were repeatedly united by "relinking" the ties which were already formed (Halphen, Helbronner).

[2] The daughter-in-law of Myrtil Dupont, the wife of his son Gustave, was a Halphen.

A study of the genealogies of upper class Parisian Jewish families reveals strong links between a finite number of dynasties. This point was strongly underlined in the British Jewish society by Chaïm Bermant who, moreover, entitled his book *The Cousinhood* (Bermant 1971). Stephen Birmingham made similar observations regarding New York families. He referred to the expression used by group members, "Our Crowd", for the title of his own book (Birmingham 1967). The alliances were created from among a "stock" of families whose number seems limited, but for whom the problem of location did not play a role. A true European marriage market may be observed. In the 19th century, the international seat of a number of financial dynasties is, in certain cases, closely linked to the need to set up branches in the principal economic centers with a family member at their head, as a security measure. The consequence was an extended family network wherein each couple was a link in a group of tightly interwoven families, on a scale which goes well beyond the frontiers of a single country.

An additional point merits attention as to the necessity of ensuring one's business relations: the frequency of alliances contracted within the same family. The Rothschild family is often cited as an example of such. Other families, however, exhibited similar behavior, notably the Königswarters.

The matrimonial networks of the Jewish upper class in Paris : a problem of method

The aim of this study is to understand the matrimonial network of Jewish families in Paris in the late 19th century and to analyze its origins and evolution. The issues related to the geographical distribution of Jewish dynasties in Europe render this aim difficult to achieve. The analysis of the matrimonial networks would seem difficult to capture on the scale of one city or even one country. It requires taking into account the presence of families in Parisian society as well as any relevant international geographical dispersal. To limit the study to marriages in Paris would leave too many players out. Similarly, to include only those families present in the capital at a given moment would risk skewing the results since others, present temporarily, might be forgotten.

To properly identify the families making up the Jewish upper class in Paris in the late 19th century, we began with patrilineal lines or "dynasties" included in the 1899 and 1901 editions of the *Livre d'Or des Salons*. We relied on this directory to define what sort of families could meet our definition.[3] For the most part, these families did not have long-standing Parisian roots and most often their cousinhood

[3] We recorded the Jewish surnames included in the society lists of these directories. When the listing did not include the name of the spouse, we researched that person's identity and then included that surname in our corpus. Finally, when there was a mixed marriage, the surname of the non-Jewish spouse was not recorded.

spread far beyond Paris: the geographical distribution of the dynasties from which such families descended was not limited to Paris exclusively. One hundred forty-six surnames were noted in the 1899 and 1901 editions of the *Livre d'Or des Salons*. A preliminary remark is essential: the majority of families noted therein are of foreign origin, mainly German, but also Russian, Austrian, Italian and others with origins in the Ottoman Empire. The "French" families are not the majority in the grouping of Jewish upper class families noted in the *Livre d'Or des Salons*: There are those from *départements* of Eastern France such as the Goudchaux, Halphen, Javal, Ratisbonne, Worms and Worms de Romilly families and of southwestern France, such as the Pereire, Rodrigues-Henriques, Raba and Gradis families. The German contingent is a large one: in addition to the Rothschilds, there are also the Bamberger, Bischoffsheim, Ellissen, Haber, Heine, Helbronner, Kann, Kohn, Königswarter, Stern, and Weisweiller families. A few representatives of Austrian families such as the Gutmanns, Pfeiffers and Biedermanns are also noted in the directory. Among the Russian families are listed the Ephrussi, Gunzburg[4], Poliakoff and Warschawsky families. From Italy : the Leonino, Morpurgo[5], Hierschel de Minerbi and Franchetti families; from England the Sassoons and Gubbays; and finally from Eastern Europe and the Middle East are the Camondos, Halfons, Hillel Manoachs and Alfassas.

To define the matrimonial networks of this population, the marital alliances made between patrilineal descendants over the period of 1850-1899 were collected, whether or not the couples were present in Paris during that period. For this, we referred to the genealogies of the dynasty corresponding to the surname collected. This study of the links between the notables present on the society list of the *Livre d'Or des Salons* at the end of the 19th century using the patrilineal lines to which such persons belonged as reference permits the observation of the structure of the links between them, their strength and the sub-groups which make up the overall group of these patrilineal lines.

The following step is to compare the characteristics of this initial network with those of the same players over the 1900-1950 period in order to study its development. Is there a disintegration of links or are they maintained at the same level up to the war starting in 1940? Did the multiplication of ties to the aristocracy which can be observed in a number of families favor a weakening of such links? Several hypotheses may be advanced. Similarly, in order to identify the origins of the network in the second half of the 19th century, we study the characteristics of the one involving the same actors from 1770-1849. Looking at the network in the preceding period will demonstrate the lasting matrimonial links between certain actors.

In summary, we compare the "primary" network of marriages between 1850 and 1899 to networks involving the same actors before and after that period. Again, not all marriages collected correspond

[4] Even if she was more distantly of German origin.
[5] Even if she, too, was more distantly of German origin.

necessarily to couples residing in Paris. This is not, therefore, a study of strictly Parisian Jewish matrimonial networks but rather a study of alliance networks for families whose Parisian roots are pronounced, despite ramifications in other countries. The building of the corpus and complementary methods chosen take into account a specificity of the population studied: the geographic dispersion of different lines of members and their frequent multiple residences.

Forming genealogies

Our objective was to associate each of the collected surnames with its family dynasty and to locate for each its corresponding genealogy.

The first likely difficulty was to have several family dynasties for one surname, especially where the surname is very common. Such cases are in fact rare in the society entries of the directories consulted. In the case of Halphen, we were faced with a single family, that of jeweler Salomon Halphen. The same was true for Lévy, which exclusively referred to the Raphaël-Georges Levy family. As to Dreyfus, two lineages can be traced within the subject directories. In other cases, it proved impossible to distinguish between the families sharing certain surnames (Weill, Weyl). For the "rarer" surnames, identifying the corresponding dynasty proved rather straightforward. In certain cases, nonetheless, the task proved impossible and the names could not be included in the study (de Almeda). Moreover, in many other cases, the presence in the directory can be explained by the institutional position occupied by the notable mentioned therein (*notaire* Armand Aron, Director of the Observatory Maurice Loewy, and director of the Ecole des Chartes Paul Meyer, etc.). In these particular cases, we also left out the corresponding surname. Finally, in other cases it was not possible to reconstruct an accurate family genealogy (Brandeis). In just a single case did we decide to include a name absent from the directory but whose renown argued for its inclusion into the corpus: that of the Haber family. Thus, out of a list of 146 surnames, 114 dynasties were chosen for matrimonial network analysis. This does not mean that 32 surnames were left out of the study, but it is clear that those 32 do not play a significant role in the functioning of the network because otherwise such family members would have appeared more noticeably in reconstructing the genealogies.

For each of the 114 dynasties chosen, a genealogy was possible. To the extent possible, the study aims to cover the period from 1750-1950. Our sources for genealogical reconstruction were varied.[6] Regarding the depth of genealogical research, two issues arose: the status of Jews in the different European countries presenting a number of similarities such as a specific system of individual

[6] *Cf.* References.

denomination, and the absence of registers for births, marriages and deaths. To go back further would have raised a number of problems, without obvious interest. The importance for this work lie in studying families beginning with their initial prosperity. It is from the moment when the foundations are set for its social rise and economic advancement that the family becomes relevant for purposes of a study of matrimonial strategies.

The reconstructed genealogies provided the basis of a table summarizing matrimonial exchanges between the various dynasties. This table presents in lines and columns the same elements: the dynasties. We assigned men to the lines and women to the columns. Line A intersecting with column B shows the number of marriages between the male members of dynasty A and female members of dynasty B. There is thus no symmetry as we distinguish the marriages between men of A dynasty and women of B dynasty from men of B dynasty and women of A dynasty. Moreover, the numbers contained in the cases found on the diagonal are not necessarily zero. Marriages took place between members of the same dynasty, such as uncle-niece or cousin-cousin who had the same surname.

Three tables or matrixes were formulated based on the marriages taking place among the chosen dynasties for the periods of 1770-1849, 1850-1899 and 1900-1950. Three networks shall be highlighted in order to better understand the origin and development of the system of inter-marriage between the principal dynasties making up the Parisian Jewish upper class of the late 19th century.

Jewish Upper Class Matrimonial Networks in Paris 1770 - 1950

Our objective is to better define what would appear to be a strong series of links between a limited number of patrilineal dynasties.

Different actors on the international matrimonial market shall be considered as a whole. It is necessary to define the principal characteristics of the table of marriages in a relatively formalized manner. The first table from which one might distinguish between the marriages of the "man of dynasty A (X) woman of dynasty B" type and "woman of dynasty A (X) man of dynasty B" type was, in fact, eliminated. It appeared more logical to erase this difference and to consult the number of matrimonial ties between patrilineal dynasties.[7] In fact, the differentiated strategy in the possible exchanges of spouses between descendants depends on the distribution by gender of the children of a same family, whereas such a distribution cannot be controlled by the families.

[7] In technical terms, the baseline matrix was symmetrized and we added up the matrix values (xi, yj) and (xj, yi).

To go beyond the unique description of multiple cases of matrimonial proximity between a relatively small number of dynasties, we employed sociological networking analysis techniques. These techniques offer the tools to pinpoint the intensity of matrimonial links in a formalized way. Such requires reference to a certain number of simple concepts created by networking sociologists.

Network analysis enables a response to several questions which address either the behavior of dynasties considered on an individual basis or the structure of the network considered overall.

In the first case, a hierarchy of dynasties must be established according to various criteria. Network analysts employ the term centrality :

- Degree centrality: the most immediate and obvious criteria is the degree centrality index. It requires counting the number of links of a member of the network with the total of each of the other participants. Here, an individual is central if he is connected to a significant number of other individuals of the same network. In our particular case, a dynasty is considered central if it shares a significant number of matrimonial ties with the other dynasties of the network, outside its own.[8]
- Closeness centrality: once again, this form of centrality does not address the number of ties of an individual, but refers to his position in distance terms compared to other members of the network.[9] An individual is considered central if the distance which separates him from other members of the network is minimal. The most central individual is he who travels the "average" shortest distance linking two members of a network. The individual who is furthest away "on average", on the other hand, is considered an isolated individual.[10]
- Betweeness centrality: this centrality looks at another aspect of the position of each of the network members, that of facilitating the formation of a relationship between two or more members. Certain members, for example, may not prove important within a network in terms of degree centrality but hold a strategic linking position of intermediary between certain other actors. In this case, an individual will be central if his intermediary position is important. In the example of a star-shaped network, the central individual is inescapable when a peripheral actor wants to contact another peripheral actor: he must go through the individual at the heart of the network for whom the intermediacy index will be high.[11]

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[8] We could have chosen the matrimonial links present within the same dynasty. We preferred instead to limit ourselves in this case to just those links with other members of the network, with the intention of specifically studying the inter-dynasty links at a later date.

[9] In other words, the number of steps separating him from another actor in the network.

[10] A calculation of closeness centrality must be made based on a connected network: this index only in fact makes sense if each of the individuals may be reached by all of the other network members (Wasserman and Faust 1994, 185). A network including groups of isolated actors would render a calculation impossible. The procedure was thus applied here to the principal component of the network, consisting of 85 dynasties. (*cf. infra* Global Network Analysis - Components).

[11] Besides his degree and proximate centrality.

- Moreover, it is interesting to see how the distribution in terms of network players for the different indexes. For degree centrality, for example, does a dynasty concentrate most of its ties – such would resemble a network star structure – or are the links equally divided out among the players, like within a network circular structure ? This sharing out is estimated with the help of global indexes unique to each centrality. For degree centrality, it is called the Group Degree Centralization index[12] (Wasserman and Faust 1994, 180). For Closeness Centrality, it is referred to as the Group Closeness Centralization index. Finally, for Betweeness Centrality, it is called the Group Betweeness Centralization indices. Each index runs from 0% to 100%.

The dynasties shall be considered individually by observing the numbers found on the diagonal of the marriage matrix. They correspond to the intra-dynastic marriages, for example Rothschild/Rothschild.

Secondly, we will evaluate the density of the network and study its structure by the sub-groups which form it. Is the network made up of a single group of players through which everyone else is linked? Or, on the contrary, are there numerous groups which are smaller in size and isolated from one another? Finally, we shall study the closeness between dynasties and the determining factors therein. Do certain players maintain particularly strong links in such a way that they constitute a sub-group apart from the heart of the network? We will need to employ the concept of a clique. Observing the matrix of marriages will also allow us to measure the behavior of relinking marriages without consanguinity.

Both approaches – individual and global – are naturally complementary : the aim is to provide an image of the structuring of the milieu studied through the matrimonial links of the various players.

Individual analysis of network members: various forms of centrality

During the second half of the 19th century, no matter which centrality is studied – degree, closeness or betweeness –the same group of families repeatedly tops the list. They are the true holders of the central positions in the network. There are six of them: Goldschmidt1[13], Halphen, Fould, Kann, Rothschild and Gunzburg. On what points can we compare and distinguish between them? There are two families from the East of France (Halphen, Fould), three German (Goldschmidt1, Kann,

[12] The Group Degree Centralization Index cannot be applied to a valued matrix such as the one present in this study. The calculation was thus made on the basis of a presence/absence matrix.

[13] Reference here is to Goldschmidt1, the dynasty originating in Frankfurt, not to be confused with Goldschmidt of Cologne (Goldschmidt2) the family of financier Ferdinand Goldschmidt, founder of a line of the Parisian upper class.

Rothschild) all of whom are originally from Frankfurt, and finally a Russian family (Gunzburg). In half of the cases, the families first moved to Paris in the early 19th century or even during the revolutionary and Napoleonic periods (Halphen, Fould, Rothschild). Five of the families made their initial wealth in finance, while Salomon Halphen made his fortune as a diamond merchant.

A study of the three group indexes demonstrates, however, distributions which are relatively equal to the individual indexes (table #1).

Degree centrality index group	12.40%
Closeness centrality index group	28.90%
Betweenness centrality index group	16.90%

Table #1 – Group centrality index

Thus, the six named families are clearly the most central, and any inequality between the group of actors as a whole from any of the centrality perspectives is little pronounced.

Individual analysis of the network actors: intra-dynastic marriages

The preceding analyses did not take into account the numbers located on the diagonal of the marriage matrix. Such numbers reveal the marriages involving persons with the same surname and descended from the same founding ancestor. These are, in fact, marriages between blood relations.

We shall initially study the unions between holders of the same surname, followed by the unions between blood relations but holders of difference surnames which were identified by studying the family genealogies.[14]

The Rothschild example

The subject of intra-dynastic marriages can be approached by the example of the Rothschild family, in which this type of union was the most frequently used. This corresponds to a conscious strategy to avoid the dissipation of the family holdings and to maintain a strong degree of confidence between the partners, notably between the different European houses. It should be recalled that in fact the founder of the Rothschild bank, Amschel Mayer, progressively sent out four of his five sons to different European capitals as representatives of the first bank set up in Frankfurt: Nathan went to London, Salomon to Vienna, Charles to Naples and James to Paris. Only Anselme stayed in Frankfurt (Bouvier

[14] In the second case, more marriages between blood relations are likely to take place as the genealogical depth is greater. It is possible in such cases that this is not always sufficient to detect the true magnitude of this sort of union.

1967, 46 ; 59). Anselme's marriage to Eva Hanau did not produce any offspring. His nephews Mayer Carl and Wilhelm Carl of the Naples branch would succeed him at the head of the Frankfurt bank. Another important point: the Naples branch would only barely survive the death of its founder.[15] His third son, Adolphe, succeeded him after his death in 1855. He would close the bank in 1863, after which he moved to Paris.

The Rothschild-Rothschild marriages began in the second generation with James de Rothschild. In 1824, the founder of the French branch and youngest of the "five brothers" married his niece Betty de Rothschild, daughter of his brother Salomon Mayer, 18 years his senior and founder of the Viennese branch. James de Rothschild was then 31 and his wife 19. But it is especially in the third generation that this family policy would become widespread in practice. Thus "out of nineteen cousins of the third generation – the children of the 'five brothers' -- fourteen married a Rothschild" (Cassis 1984, 257). Of the fourteen unions, four between first cousins counted each two times. That leaves ten "true" marriages which united members of the third and fourth generations.

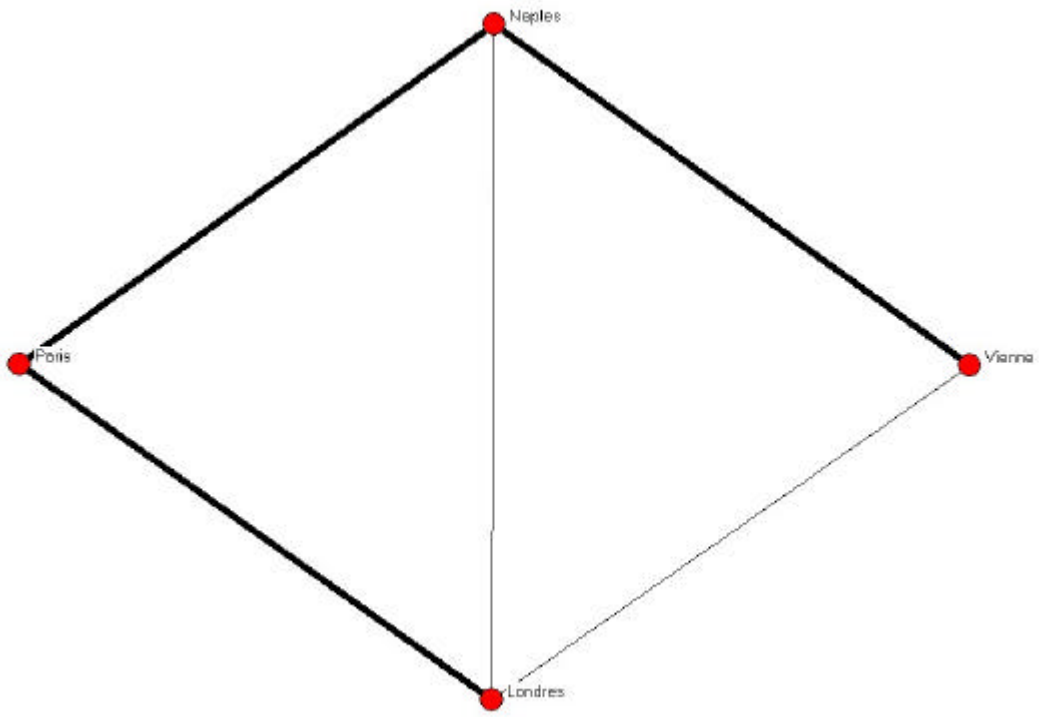
	Husband			Wife			
Year of marriage	Generation #	First name	Family branch	First name	Family branch	Generation #	Degree of kinship
1824	2	James	Paris	Betty	London	3	3
1826	3	Anselme	Vienna	Charlotte	London	3	4
1836	3	Lionel Nathan	London	Charlotte	Naples	3	4
1842	3	Mayer Carl	Naples	Louisa	London	3	4
1842	3	Nathaniel	London	Charlotte	Paris	3	4
1849	3	Wilhelm Carl	Naples	Hannah Mathilde	Vienna	4	5
1850	3	Adolphe Carl	Naples	Julie	Vienna	4	5
1857	3	Alphonse	Paris	Leonora	London	4	5
1862	3	Salomon	Paris	Adèle	Naples	4	5
1877	3	Edmond James	Paris	Adelheid	Naples	4	5

Table #2 – List of Rothschild/Rothschild type marriages including at least one member of the third generation by degree of kinship

The ten marriages took place between representatives of the different branches, which thus mixed. The least exchanges took place between the London-Naples and London-Vienna branches. There were no links between Paris and Vienna. As two sons of the founder of the Naples branch, Carl

[15] The father of Mayer Carl and Wilhelm Carl, who were his two eldest sons.

Mayer, later moved to Frankfurt, there is a noticeable kind of "frontier" between the London-Paris branches and those of the German-speaking side. (Graph #1).



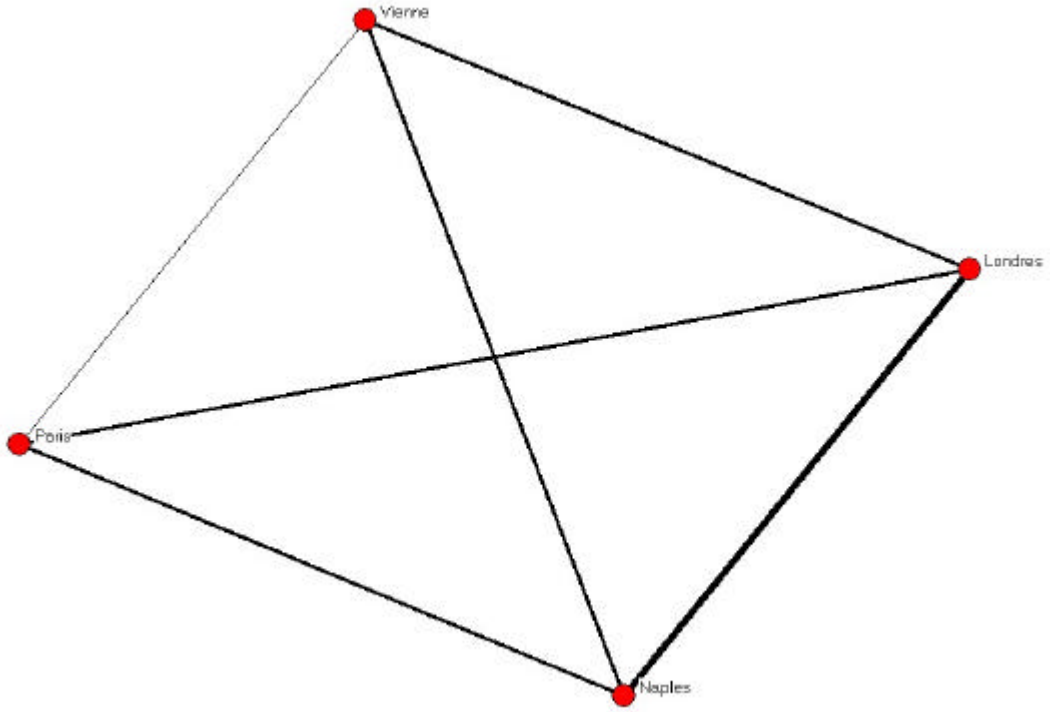
Graph #1 – Intensity of matrimonial ties among the various branches (London, Naples, Paris, Vienna) –Rothschild/Rothschild unions including at least one member of the third generation

In the next generation, this type of alliance becomes rarer. There were only four out of a large number of marriages (40). Moreover, these unions included individuals who were further apart on the family tree, and no longer included unions between first cousins or marriages between uncle and niece. In addition, the discernible divide between the German-speaking cities and London-Paris no longer is apparent at this stage; the unions designed to strengthen the ties and interests of the family cease after 1876.

	Husband			Wife			
Year of marriage	Generation #	First name	Family branch	First name	Family branch	Generation #	Degree of kinship
1865	4	Ferdinand	Vienna	Evelina	London	4	6
1867	4	Nathaniel	London	Emma Louise	Naples	4	6
1871	4	James	London	Laura Therese	Naples	4	6
1876	4	Salomon Albert	Vienna	Bettina Caroline	Paris	4	6

Table #3 – List of Rothschild/Rothschild type marriages of the fourth generation by degree of kinship

The same graphic of ties between branches including the unions of the third and fourth generations demonstrates the absence of a divide between the German-speaking branches and London-Paris.



Graph #2 – Intensity of matrimonial ties between different branches (London, Naples, Paris, Vienna) – case of Rothschild/Rothschild unions including at least one member of the third or fourth generation

It is later that some unions between blood relatives who nonetheless did not share the same surname appear. For the French branch, for example, there was the marriage of Alexandrine de Rothschild, daughter of Gustave and Cécile Anspach, to Albert Maximilien de Goldschmidt-Rothschild in 1910. The two spouses were first cousins, their common grandparents being Wilhelm Carl and Hannah de Rothschild, herself born a Rothschild. Similarly, the two marriages of Guy de Rothschild were with blood relatives : the first in 1937 to Alix Schey de Koremla, the second in 1957 to Marie-Hélène de Zuylen de Nyevelt. The degree of separation of the spouses was in the first instance nine degrees, the common ancestor being Mayer Amschel Rothschild. In the second case it was seven degrees, the common ancestor there being James de Rothschild[16].

[16] Other than the three marriages cited including members of the French branch, seven other marriages between blood relations took place which mixed members of the other branches. These included marriages between Anthony de Rothschild and Louise Montefiore (1840), Mayer Beyfus and Mary Beyfus (1843), Henry Spinger and Emma Alenfeld (1875), George Landauer and Henriette de Worms (1896), Philipp Schey de Koromla and Lili von Goldschmidt-Rothschild (1906), Rudi von Goldschmidt-Rothschild and Betty Lambert (1912) and Ernst Springer and Sophie Beyfus (Valynseele and Mars 2004, 491).

This may lead one to believe that originally the practice of wedding blood relatives was the result of a true strategy in which the marriage was an instrument to perpetuate economic ties between the different bank branches. Later, it is likely that such unions were accidental.

Beginning in the late nineteenth century, however, the geographical horizon of the representatives of the French branch of the Rothschilds was not limited to the national borders. It is true that certain spouses were from French Jewish families (Halphen, Anspach) or foreign families present in France since the mid-nineteenth century (Beer, Ephrussi, Weisweiller). Often, however, the spouses were chosen from among foreign Jewish families, for example the Leonino, Sassoon, Pinto and Lambert families, of whom certain had economic ties with the Rothschilds. This was the case notably with Léon Lambert. Born in Lyon but naturalized Belgian in 1872, he was the Rothschild representative in Brussels (Valynseele and Mars 2004, 306). In 1882, he married Lucie de Rothschild, daughter of Gustave de Rothschild and Cécile Anspach.

An imitated model: the Koenigswarter family

The descent of Jonas Hirsch de Königswarter includes several marriages Königswarter – Königswarter. As in the case of the Rothschilds, three of the sons of the founder of the dynasty, Jonas Hirsch of Fürth, would move to different European cities : Marcus Jonas to Frankfurt, Moritz Jonas to Vienna and Julius to Amsterdam. The eldest of the sons, Simon, stayed with his father in Fürth. This strategy would continue in the third generation with Léopold Simon (son of Simon) in Hamburg, and Louis Jean, Henri Jules and Maximilien Jules in Paris, these last three being the sons of Julius Königswarter of Amsterdam.

	Husband			Wife			
Year	Genera-tion	First name	Family branch	First name	Family branch	Genera-tion	Degree of kinship
1829	3	Jonas Marcus	Frankfurt then Vienna	Josephine	Vienna	3	4
1840	3	Louis Jean	Amsterdam then Paris	Clara	Vienna	3	4
1844	3	Maximil-ien	Amsterdam then Paris	Eleonore	Vienna	3	4
1847	3	Henrich	Amsterdam then Paris	Friederike	Hamburg	4	5
1864	4	Arthur	Frankfurt	Julie	Amsterdam then Paris	4	6
1875	4	Julius	Amsterdam then Paris	Antoinette	Amsterdam then Paris	4	4

Table #4 – List of marriages Königswarter/Königswarter by generation and degree of kinship

The first of these marriages, of Jonas Marcus to Joséphine, can be explained by the death of her father without male descendants in Moritz in 1829. His nephew, Jonas Marcus, would then leave Frankfurt to

run the Viennese bank and would also marry his cousin. Family cohesion and solidarity remained priorities.

As in the Rothschild example, the intra-dynastic unions only lasted for a limited time. They would disappear after 1875. Moreover, there was but a single marriage between blood relations including a Königswarter, but it did not involve the French branch of the family[17].

Analysis of the group network : matrimonial intensity and closeness within the Parisian Jewish Upper Class

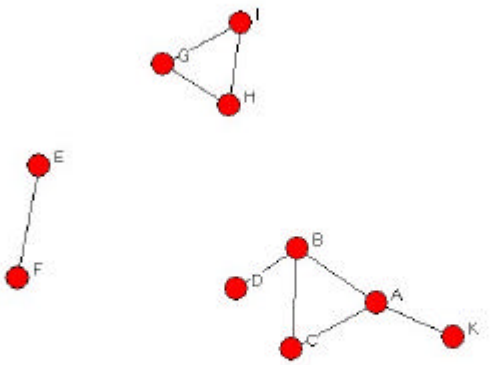
We may observe (a) the group characteristics of the network of marriages taking place between 1850 and 1899, then (b) any sub-groups thereof. Sub-groups are thus defined when the inter-relations are particularly dense. In all cases, the results obtained for the 1850-1899 period shall be compared with those of the preceding and following periods. How was the network originally constituted and how did it evolve?

(a) The density, network structure in component terms and the core/periphery procedure shall be addressed in turn. (a1) The first characteristic studied, that of density, is the relationship between the number of relationships observed among the actors compared to the number of potential relationships. (a2) The composition of the network by components determines whether *matrimonial network* is the applicable term in this case. A component is a sub-group of network actors in which each member of the sub-group can be reached by the other actors of that same sub-group (Wassermann and Faust 1994, 109-110). A network can thus be composed of several components.[18] Studying the components will demonstrate whether this is

[17] This was the marriage in 1846 of Isaac Low Königswarter, son of Marcus Jonas and Lisette Lieben, daughter of Jacob Lieben and Babette Königswarter. The degree of kinship is five. There was another marriage between blood relations : Louis Merton to Françoise de Pfeiffer, whose common ancestor is Marcus Jonas Königswarter (fifth degree).

[18] Example of a network composed of three components :

a collection of isolated dynasties maintaining few relationships between themselves, or a strong interwoven structure. (a3) Using the core/periphery procedure allows for a better identification of the structure of any resulting network. The goal of this procedure is to reveal those dynasties with the most intense relationships. For this, the software classifies the lines and columns of the table of matrimonial networks in decreasing order. It distinguishes between the "core" of the elements with the strongest links, and the other, more peripheral, dynasties.[19]



[19] Example of a core/periphery procedure result:

"Base" matrix

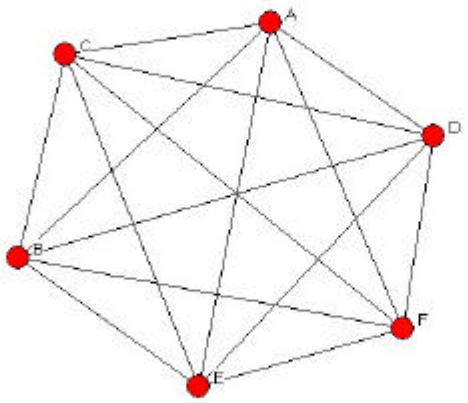
		1	2	3	4	5	6	7	8	9	10
		A	B	C	D	E	F	G	H	I	K
1	A										
2	B	1									
3	C	1	1								
4	D		1								
5	E										
6	F					1					
7	G							1	1		
8	H								1	1	
9	I							1	1		
10	K	1									

(b) The research regarding cohesive sub-groups will be carried out firstly by an analysis of cliques. A study of the relinking marriages will follow. (b1) A clique is defined as a sub-group of network actors wherein each is connected to all the other actors of the sub-group.[20] The composition of these cliques and the duplications which may be observed will lead to certain conclusions regarding the closeness of the dynasties. The context around such results obtained by period will contribute to our understanding of any such closeness. (b2) The relinking marriages, or the repeated marriages between two patrilineal descendant lines throughout the generations, whether or not the spouses are blood related, reveal another form of closeness. The changes in the frequency of such unions and the dynasties they involve shall be studied in turn.

Result after core/periphery procedure

		8 H	7 G	9 I	1 A	5 E	6 F	2 B	3 C	4 D	10 K
8	H	1		1							
7	G	1	1								
9	I	1	1								
1	A										
5	E										
6	F				1						
2	B				1						
3	C				1		1				
4	D						1				
10	K				1						

[20] Example of a clique :



Network characteristics : (1) density

Density is the result of the relationship between the number of cases where one – or more – link(s) are observed and the number of cases where one – or more - link(s) may be made.[21]

Period 1	Period 2	Period 3
0.0129	0.0206	0.0115

Table #5 – Density of the marriage network – changes by period

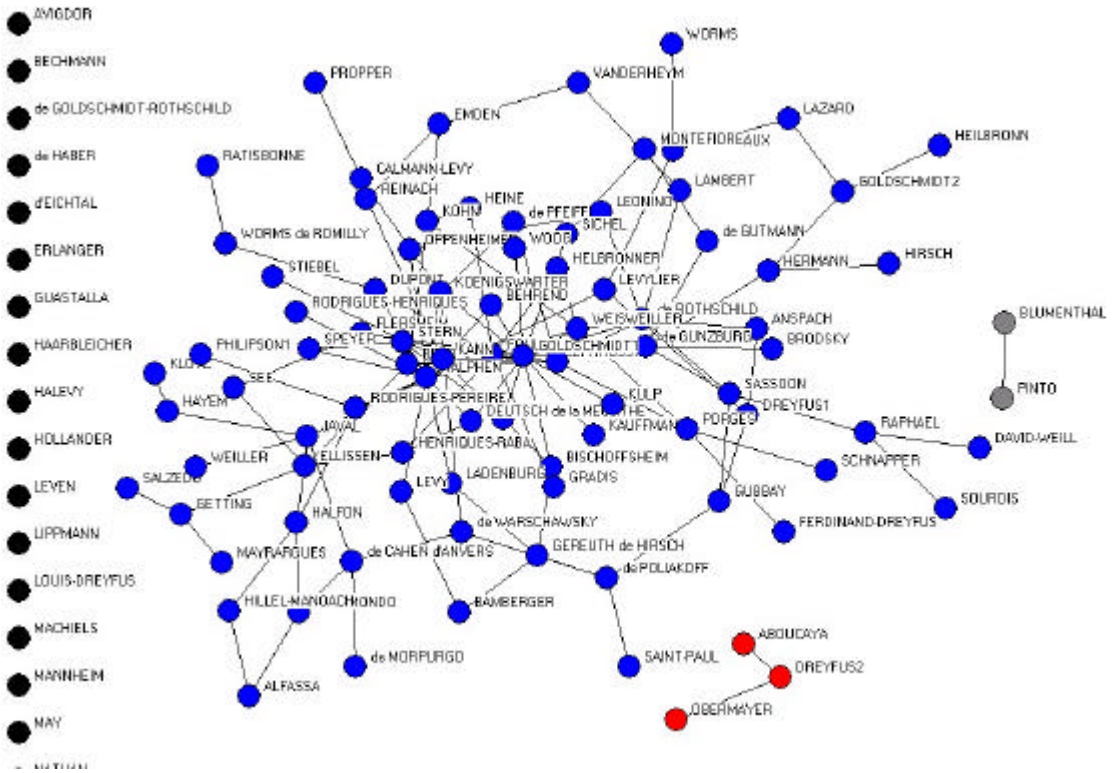
The 1850-1899 period exhibits the highest density. The weak values observed are the result of the specificity of the marital link.

Network characteristics (2): the components

The principal component refers to a group of actors permanently linked by an edge. Each component includes a unit of elements linked together. Studying components reveals the state of the network. Such exists between two extremes : a scattered group of actors without any link between them, thus isolated, and a single unit of actors permanently linked to the group by an edge.

The network includes 24 isolated elements, meaning those families included in the social list of the *Livre d'or des Salons* of the late 19th century having married outside the network. Aside from these isolated elements, there are three principal components in the network for the 1850-1899 period.

[21] For calculating purposes, we transformed the marriage matrixes into matrixes of presence/absence. For that purpose, all values equal or greater than 2 were recoded in 1.



Graph #3 –Matrimonial links of the Parisian Jewish upper-class –1850-1899 (isolated elements are not all represented on the graph)

These three components are of very different sizes. In fact, two components are size 2 (Blumenthal-Pinto) and 3 (Aboucaya-Obermayer-Dreyfus2) while the third brings together 85 elements. These 85 dynasties share matrimonial links, all of which were made between 1850 and 1899. This proves the interconnexion of all of these dynasties in the late 19th century: 75% of the dynasties figuring in the editions of the *Livre des Salons* have cousinhood links based on marriages taking place between 1850 and 1899.

The study of network components from 1770-1849 and 1900-1950 clearly shows that the second half of the 19th century was the period during which the network was the most extended. In fact, the size of the most important component of each of these two other periods is 52 and 50 dynasties, respectively, versus 85 for the "central" period. Moreover, for each of these two periods, the network profile is close: 52 and 49 isolated elements and smaller components: five components of size 2 for the period before 1850, five components of size 2 and one component of size 5 for the period 1900-1950. The 114 dynasties are present in each period.

	Period 1	Period 2	Period 3
Number of isolated elements	52	24	49
Number of components	5	3	6
Max. component size	52	85	50

Table #6 – Changes in network composition in terms of components

Thus, this is not a scenario whereby the average-sized components in Period 1 link up to form a larger component in Period 2, but rather a situation involving a network "heart" which shall expand initially only to contract in Period 3. The elements which make up the heart of the network in the first period are in fact present in over two of three cases (38/52) in the principal component of 85 elements in the second period, and 18 are still present in the principal component of the third period. These 18 dynasties include the Goldschmidt1, Rothschild, Fould, Halphen, Cahen d'Anvers and Weilsweiller families already mentioned, but also the Dupont, Reinach, Porges, Kauffmann, Javal and Beer families.

The network characteristics (3) : core/periphery procedure

The core/periphery procedure highlights the most active group of dynasties in terms of matrimonial exchanges .

Core/periphery procedure	Period 1	Period 2	Period 3
Core density	0.267	0.359	0.318
Number of core elements	16	13	12

Table #7 – Changes in density and in the number of elements making up the Core resulting form the core/periphery procedure

What we have learned from this treatment regarding the changes in our network can be summarized as follows: with the same number of elements, 13 in period 2 and 12 in period 3, the density falls within the core, meaning between the principal actors of the network. The ties that bind them are thus less intense. The core of the evolving network of period 1 included more actors for a markedly less density (0.267).

Moreover, there is a significant renewal of actors who maintain the closest ties between each period. Five dynasties remain linked from the first to the second period : Biedermann, Rothschild, Goldschmidt1, Kann and Stern. The same figure shows up for the second to third periods. The Kanns and Biedermanns are replaced by two French dynasties, the Foulds and the Halphens.

Thus, an analysis of density, principal components and the core/periphery procedure reveal the emergence, in the second half of the 19th century, of a true marriage network between family dynasties who have a number of members living in Paris in 1900. Almost 75% of them are genealogically connected. This network begins to dissipate in the following period, when the genealogically connected dynasties fell to 46%, and the ties between principal actors began to loosen.

Closeness of dynasties : (1) analysis of cliques

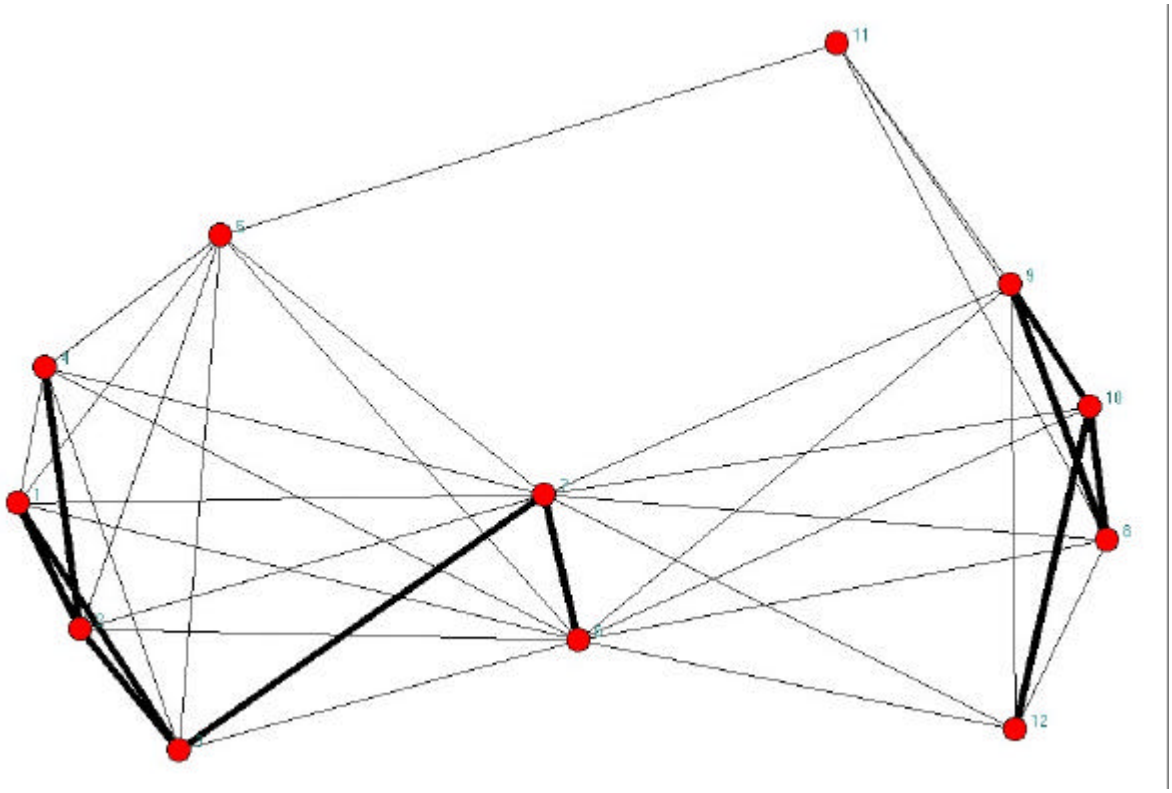
1850-1899

For the 1850-1899 period, there were 12 size three cliques, which were dynasties linked by marriage to each of the two other dynasties of the clique over the period studied. No other larger clique emerged.

Clique number	Element #1	Element #2	Element #3
1	BEHREND	GOLDSCHMIDT1	KANN
2	BIEDERMANN	GOLDSCHMIDT1	KANN
3	GOLDSCHMIDT1	KANN	KOENIGSWARTER
4	BIEDERMANN	BISCHOFFSHEIM	GOLDSCHMIDT1
5	de ROTHSCHILD	GOLDSCHMIDT1	WEISWEILLER
6	DEUTSCH de la MEURTHE	GOLDSCHMIDT1	HALPHEN
7	GOLDSCHMIDT1	HALPHEN	KOENIGSWARTER
8	DUPONT1	FOULD	HALPHEN
9	FOULD	HALPHEN	RODRIGUES-PEREIRE
10	FOULD	HALPHEN	STERN
11	FOULD	HELBRONNER	WEISWEILLER
12	HALPHEN	SPEYER	STERN

Table #8 – Composition of cliques – Matrimonial networks 1850-1899

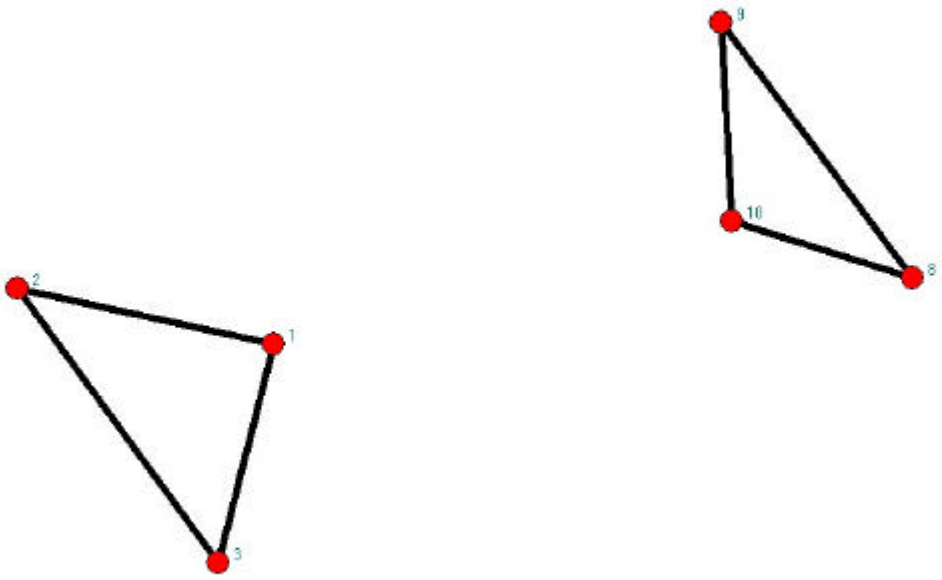
Some dynasties are present in several cliques: seven cliques include the Goldschmidtls, five the Halphens, four the Foulds, three the Kanns, etc. We have therefore attempted to extract one or more groups of dynasties from these 12 cliques. For that purpose, we can observe the links between the cliques themselves. These links correspond to the dynasties the cliques have in common (Everett, Borgatti 1998). Graph #4 shows the network made up of the cliques in relation to the elements they have in common. Double links are in bold.



Graph #4 – network of cliques number of elements in common (1 ou2)-1850-1899

When studying the cliques connected by two or more links, meaning that they have two members in common, two distinct groups emerge. The first group includes cliques 1, 2, 3, 4, 6 and 7 and involves the following families: Behrend, Biedermann, Bischoffsheim, Deutsch de la Meurthe, Goldschmidt1, Halphen, Kann and Koenigswarter. The second group is made up of cliques 8, 9, 10 and 12 with the Dupont, Fould, Halphen, Rodrigue-Pereire, Stern and Speyer families. The first group includes a majority of "German" families, plus two French families. The second, however, has four "French" families and two "German." The Halphen dynasty appears in both groups.

Closer observation of the two groups of cliques shows that the two ensembles of cliques 1, 2 and 3 on the one hand, and 8, 9 and 10 on the other, themselves make up a clique each (Graph #5). They may be labeled two "cliques within cliques."



Graph #5 – "Cliques within cliques": –1850-1899

The first group includes the following: Behrend, Goldschmidt1, Kann, Biedermann and Königswarter. The second group is made up of: Dupont, Fould, Halphen, Rodrigues-Pereire and Stern. The distinction between a group of families of German origin and a group of French origin appears more marked.

The inclusion of a relatively strict definition ("cliques within cliques") would thus lead to a distinction between families with German origins and French dynasties. When such a criteria is dropped, however, by retaining only those cliques formed by at least two links (first scenario studied), the "geographic origin" variable appears less discriminating.

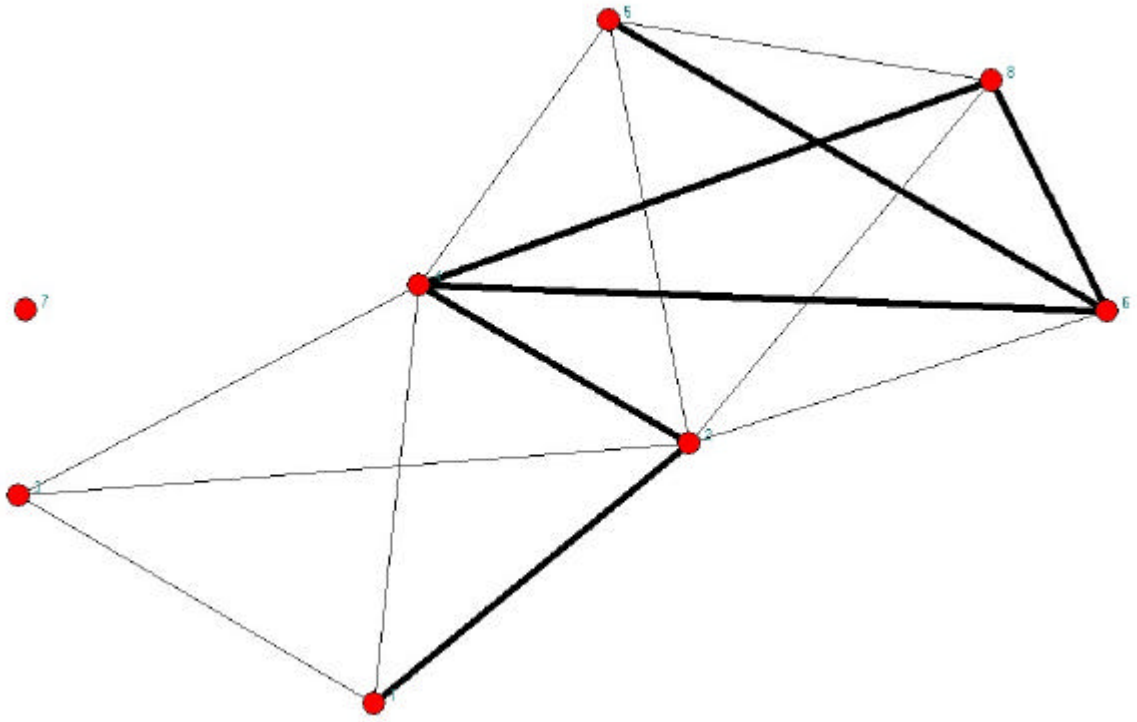
1770-1849

In comparing these results with those of the preceding period, eight cliques of three elements appear. Notably, the cliques only include families of German origin, a majority of whom are from Frankfurt (Rothschild, Goldschmidt1, Schnapper, Stern, Kann, Ellissen, Speyer, Wertheimer et Kulp, or 9 out of 13). Thus the closeness noted between the German dynasties in period 2 is simply the continuity of older links.

Clique #	Element #1	Element #2	Element #3
1	de ROTHSCHILD	GOLDSCHMIDT1	SCHNAPPER
2	de ROTHSCHILD	GOLDSCHMIDT1	STERN
3	BISCHOFFSHEIM	De CAHEN d'ANVERS	GOLDSCHMIDT1
4	GOLDSCHMIDT1	KANN	STERN
5	ELLISSEN	SPEYER	STERN
6	ELLISSEN	KANN	STERN
7	GEREUTH de HIRSCH	KOENIGSWARTER	WERTHEIMER
8	KANN	KULP	STERN

Table #9 – Composition of cliques – Matrimonial networks 1770 - 1849

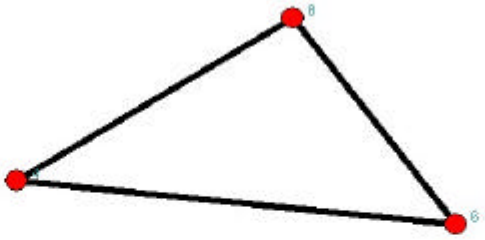
Looking again at the links that the cliques maintain between themselves from within their common dynasties and considering the number of links between them, only those cliques in contact by two links are retained for our purposes (graph #6, double links are in bold).



Graph #6 – clique network by number of common elements (1 or 2) –1770-1849

A single group appears (cliques 1, 2, 4, 5, 6, 8) linking the following dynasties: Rothschild, Goldschmidt1, Schnapper, Stern, Kann, Ellissen, Speyer, Kulp, or exclusively those families from Frankfurt.

A search for cliques within cliques revealed a single clique (Graph #7). It includes cliques 4, 6 and 8.



Graph #7 – "Cliques within cliques": --1770-1849

This single clique within a clique includes the Goldschmidt1, Kann, Stern, Ellissen and Kulp families, who form a very tightly-knit group.

The study of these various examples of closeness illustrates the intensity of the links between the German families who reunited in Paris over the course of the 19th century.

1900-1950

Observation is next made of the cliques recorded for the third period of marriages starting from 1900.

Clique number	Element #1	Element #2	Element #3
1	BRODSKY	de GUNZBURG	GOLDSCHMIDT1
2	De ROTHSCHILD	GOLDSCHMIDT1	REINACH
3	ELLISSEN	HELBRONNER	LAZARD

Table #10 – Composition of cliques – Matrimonial networks 1900-1950

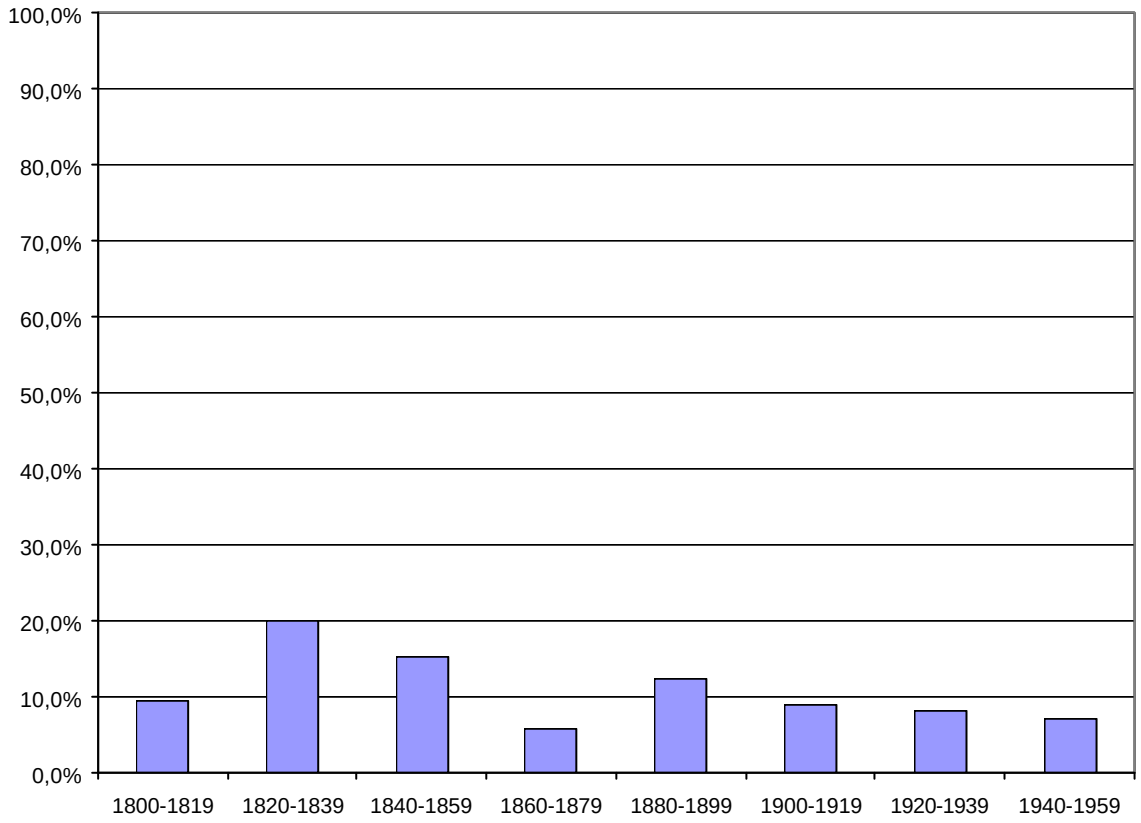
There are just three cliques, including certain families already noted (Rothschild, Goldschmidt1, Ellissen) as well as new arrivals, notably the Reinach and Helbronner families. Note that only the Lazards are of French origin. The small number of cliques illustrates a network which is more dispersed.

Closeness of dynasties: (2) relinking marriages

The matrix of matrimonial links leads to an understanding of relinking marriages. They appear as soon as the values contained in the cases exceed 1. Thus, the dynasties which relink marriages are easily discernible. As in the cases of marriages between blood relations, it is probable that the amount of genealogical depth available to us is not always sufficient to discern the true extent of this type of marriage.

Changes in the percentage of relinking marriages

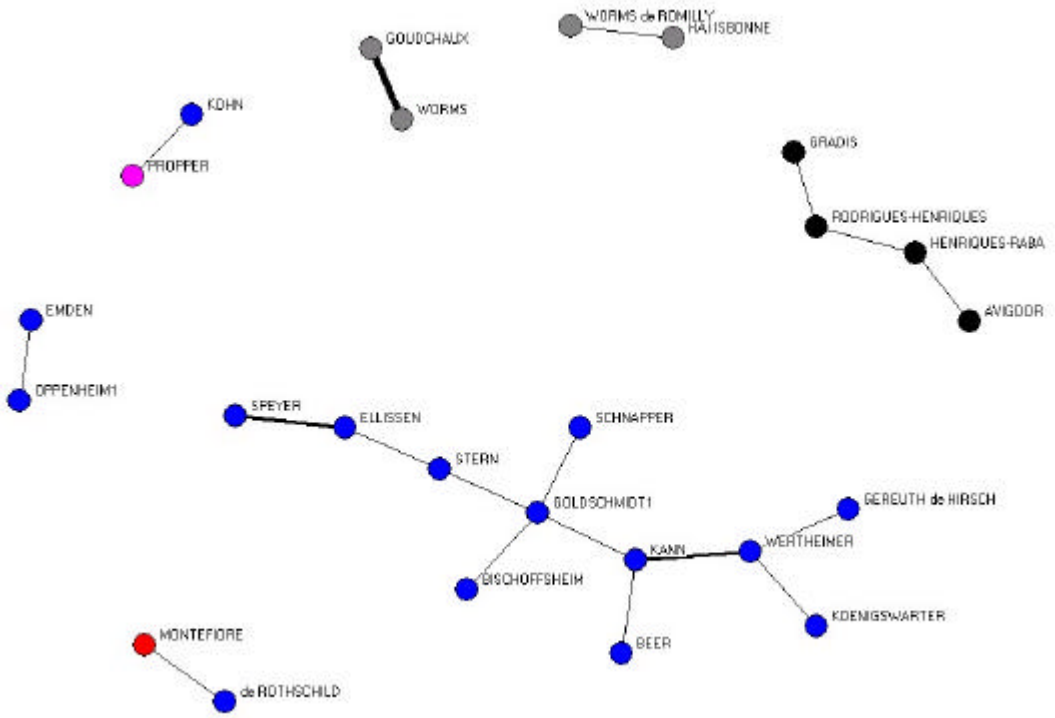
From 1800-1959, 42 relinked marriages were observed out of a total of 355, or 11.8%. Graph #8 shows the changes in the rate of these unions by 20 year period. The rate declines regularly from 1880.



Graph #8 – Changes in relinking marriages 1800-1959

Dynasties which relink

Which dynasties used these sorts of marriages? Relinking practiced before 1850 is shown below.



Graph #9 –relinking practices
1770-1849 (number of relinked marriages greater than 1 in bold)[22]

A "unit" of German dynasties, the majority of whom were from Frankfurt,[23] employed the practice of relinking marriages. In certain cases (Speyer-Ellissen, Kann-Wertheimer), there were two relinked marriages. It is of course impossible to deduce a global closeness between all these families. In fact, closeness therein may be observed by twos but not several dynasties, as may be the case in analyzing cliques. However, such does not prevent observation of the regular "links" relinking marriages which would seem to indicate that the dynasties constitute a strongly cohesive group. Within this population, the practice of relinking is not accidental, for its regularity attests to its habitual nature.

Another "unit" is the one formed by the Sephardic Jews of southwest France (Henriques-Raba, Rodrigues-Henriques, Gradis) and of Nice (Avigdor). Finally, the intensity of such a practice is of note in the Goudchaux and Worms families.

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[22] Graph legend:

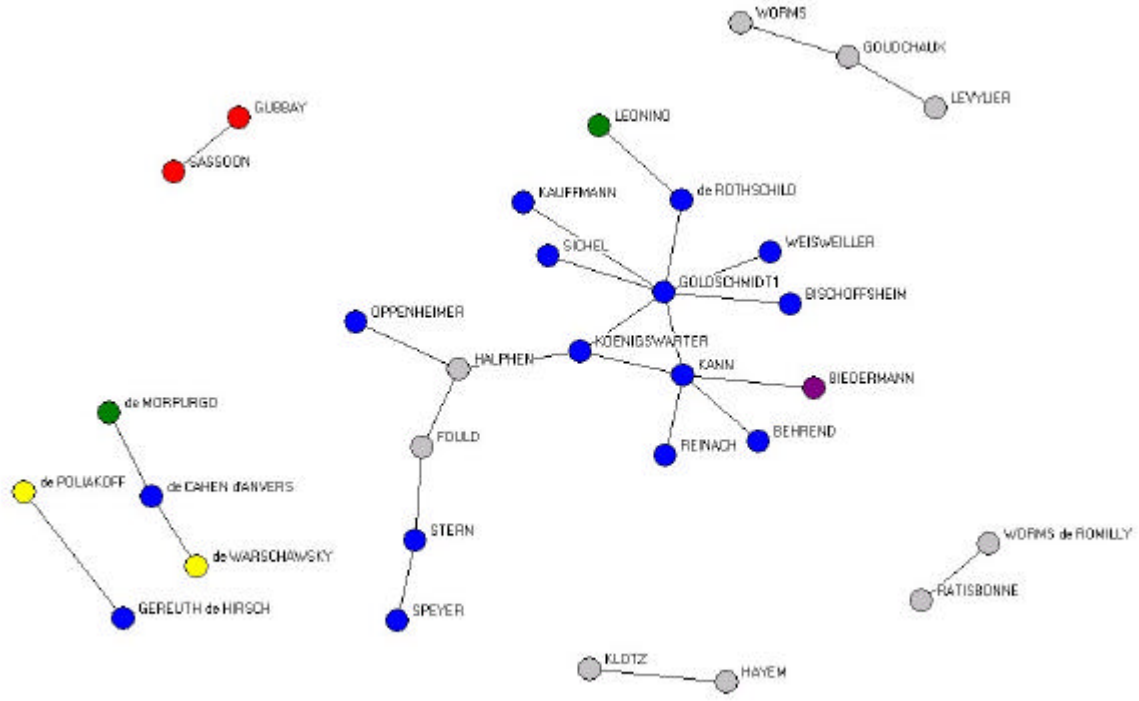
Families:
- German: blue;
- English: red;
- Italian: green;
- Austro-hungarian: purple;
- Czech: pink;
- Russian: yellow;
- Eastern France: gray;
- Southwestern and Southern France: black.

[23] Speyer, Ellissen, Schnapper, Kann, Wertheimer, Goldschmidt1, Stern.

Year of marriage	Husband		Wife	
1783	GOUDCHAUX	Jacob	WORMS	Goutla
1793	GOUDCHAUX	Cerf	WORMS	Rose
1795	WORMS	Samuel	GOUDCHAUX	Babette
1837	WORMS	Marx	GOUDCHAUX	Sephora
c. 1863	WORMS	Simeon	GOUDCHAUX	Lucie

Table #11 – Matrimonial exchanges between Worms and Goudchaux families

The practice of relinking continued throughout the second half of the 19th century. Graph #10 shows the new relinking marriages which took place between 1850 and 1899. It shows the year when the marriage sealing the relinking took place between 1850 and 1899, while preceding unions between the two dynasties may date from the same period or the previous one.

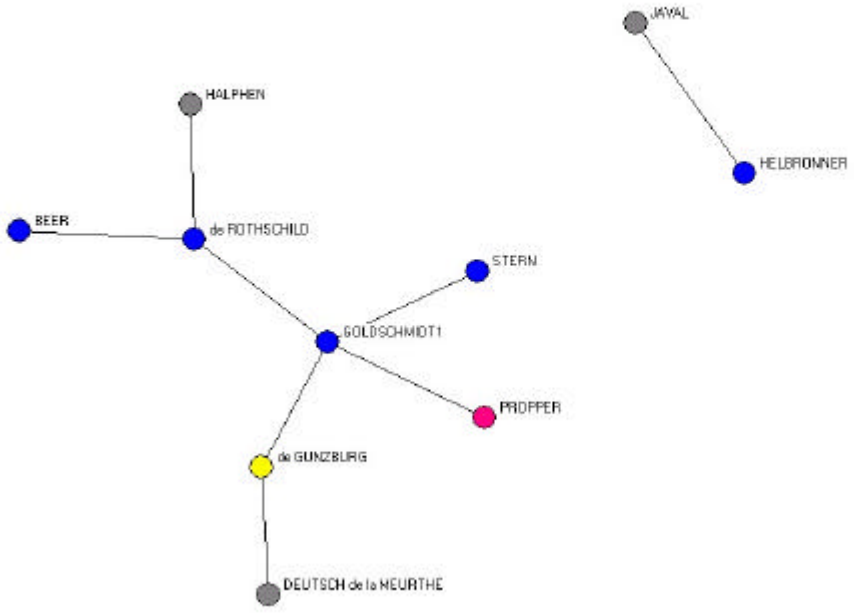


Graph #10 – Relinking practices –1850-1899

The families of the southwest and Provence (Gradis, Rodrigues-Henriques, Henriques-Raba, Avigdor) do not engage in new unions of this type after 1850. The same is true for the Kohn, Propper, Emden and Oppenheim1 families. However, closeness between the Hayem-Klotz and Gubbay-Sassoon families appears after 1850. The Worms-Goudchaux link is again reinforced by the marriage in 1867 of Siméon Worms and Lucie Goudchaux. The Cahen d'Anvers families forged relinking alliances with the Warschawsky and Morpurgo families, Russian and Italian origin, respectively.

Next observe more closely the changes in the "unit" made up of the families with origins in Germany (in blue on the graph). Originally, this group included the Speyer, Ellissen, Schnapper, Kann, Wertheimer, Goldschmidt1, Stern, Bischoffsheim, Beer, Gereuth de Hirsch and Königswarter families. For some of them, there were no new relinking marriages after 1850: the Wertheimer, Beer, Schnapper and Ellissen families disappeared from the graph (#10). For the others, a consolidation of links can be observed between the families of German origin, of whom certain are newcomers like the Weilsweiller, Reinach, Kaufmann and Sichel families. The Kann and Goldschmidt1 families hold a central position therein. Finally, note that it is through the Fould and Halphen families (in gray on the graph) that the Sterns and Speyers are thereafter connected to the other German families.

The graph below (#11) shows the relinked marriages after 1900. As with the preceding example, the marriage sealing the relinking takes place after 1900. The preceding marriage(s) may date from the same period or a preceding period. Again, it is the presence in Paris of at least one member of a dynasty which determines its inclusion in the corpus herein. Thus the graph below is not limited to only those marriages involving the French branches but includes all unions of descendants of the surname regardless where the couple was established, whether in France or abroad.



Graph #11 –Relinking practices
1900-1959

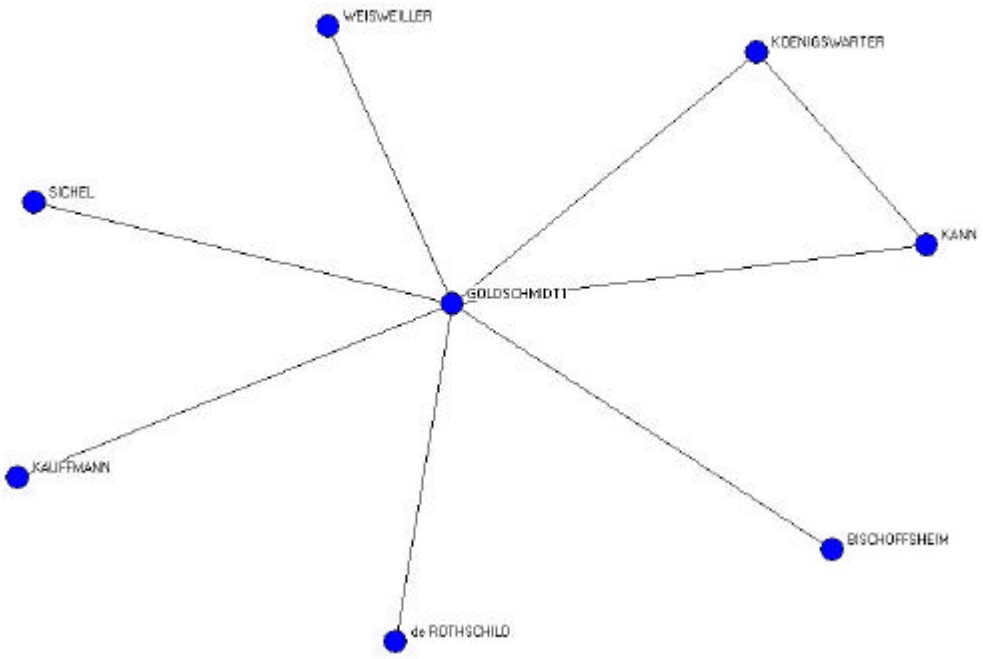
In general, the number of relinking marriages dropped sharply. The unit of German families greatly diminished. The only remaining are the Goldschmidts, Sterns and Beers who, after having disappeared

in period 2, reappeared for two marital alliances with the Rothschilds. This unit nonetheless still makes up the core around which the principal dynasties who relink gravitate.

We can illustrate these results by the example of the relinked marriages involving two central network actors: the Goldschmidt1 and Kann families.

Example of the Goldschmidt1 and Kann families

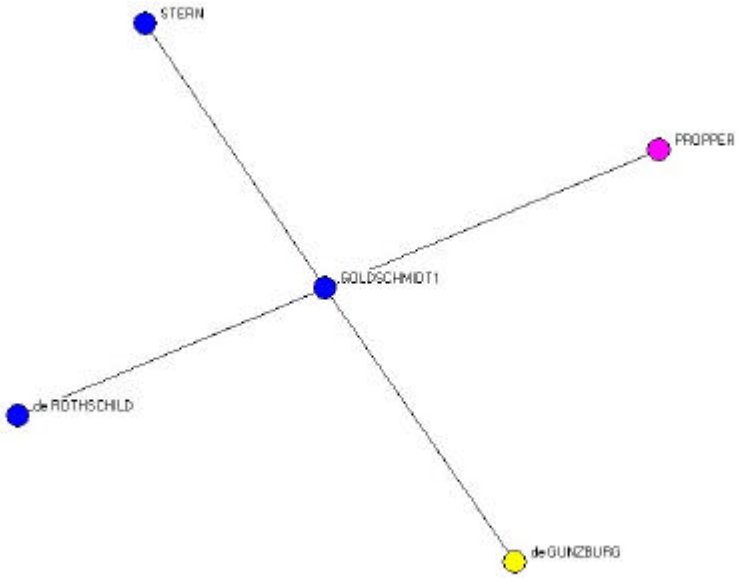
Prior to 1850, the Goldschmidt1 family had relinked with four other dynasties: Bischoffsheim, Kann, Schnapper and Stern (cf. graph #9 above). For the marriages between 1850 and 1899 (graph #12), special links with the new dynasties appear, including the Sichel, Weisweiller, Kauffmann, Königswarter and Rothschild families, while the Schnappers and Sterns disappear.



Graph #12 –Relinking marriages by the Goldschmidt1 dynasty– marriages before 1900

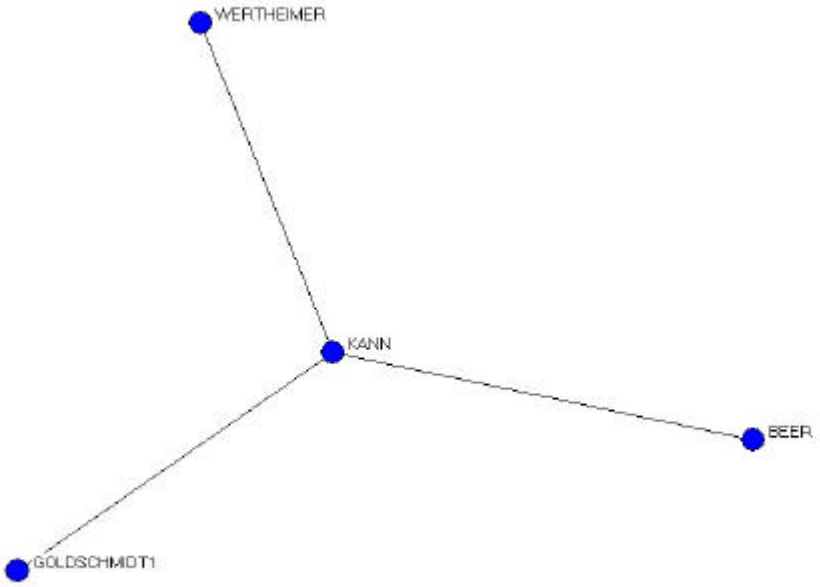
These new relinking marriages still involve exclusively the families of German origin. The graph moreover indicates the link between the Königswarter and Kann families, the three dynasties thus making up a clique (cf. supra).

The four relinking marriages involving the Goldschmidt1 thereafter (Graph #13) introduce two dynasties which are already connected (de Rothschild [period 2], Stern [period 1]), as well as two new dynasties (Propper, de Gunzburg), again of foreign extraction.

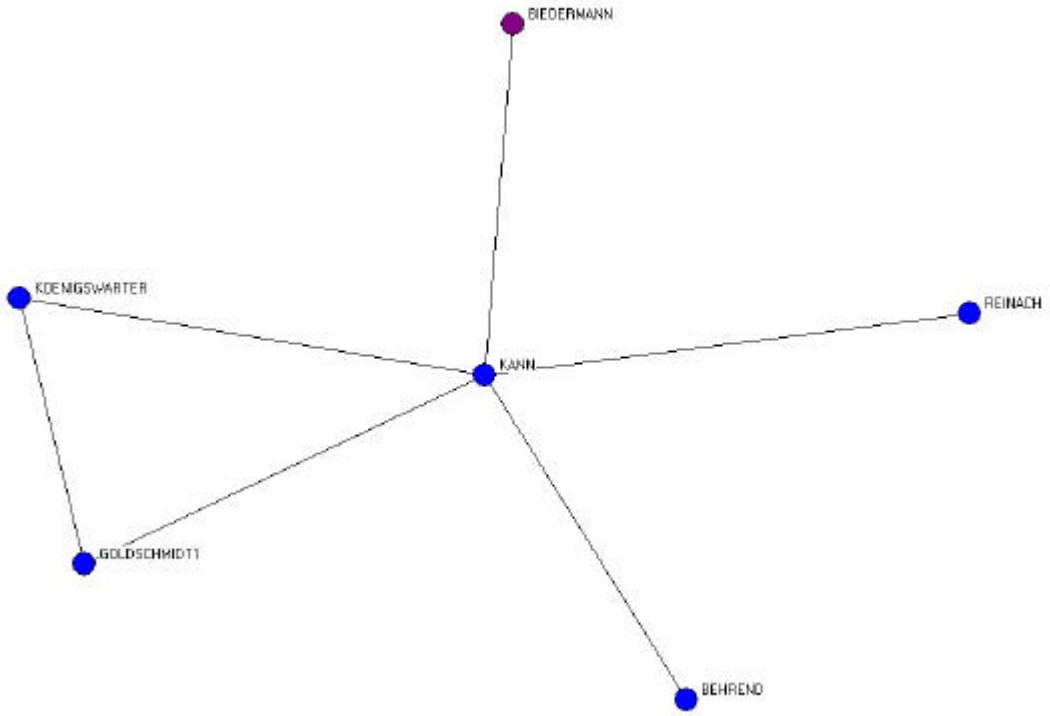


Graph #13 –Relinked alliances by the Goldschmidt1 dynasty – marriages after 1900

This can be illustrated by the relinking marriages observed within the Kann family.



Graph #14 –Relinking marriages by the Kann dynasty – marriages before 1850



Graph #15 – Relinked marriages by the Kann dynasty – marriages before 1900

After 1850, the Wertheimer, Beer and Goldschmidt1 families are substituted by the Königswarter, Reinach, Biederman, and Behrend families. Following those events, no relinked marriages can be observed.

Thus, the Kanns and Goldschmidt1 relink with the German dynasties. For certain branches of these two families, their move to Paris lead to matrimonial ties being established with French families (Halphen, Deutsch de la Meurthe, Dreyfus for the Goldschmidt1, Fould for the Kanns). Moreover, these were not repeated, which explains their exclusion from the graphs. Beginning in 1850, among the German families, only the unions Königswarter/Halphen, Rothschild/Halphen, Oppenheimer/Halphen, Helbronner/Javal and Stern/Fould would take place. In the Gunzburg family, of Russian origin, two marriages with the Deutsch de la Meurthes are arranged in 1902 et 1909.

The only “unit” observed between the French families was that formed during the period before 1850 by the Sephardic families of the southwest (Henriques-Raba, Rodrigues-Henriques, Gradis) and of Nice (Avigdor). While the relinked marriages between the “French” families of the East were also noted: Ratisbonne – Worms de Romilly, Worms – Goudchaux, Klotz – Hayem, they do not form a true “unit” which could be labeled a linking of relinked marriages. Only the Halphens and Foulds regularly marry into German families.

This result does not truly corroborate what was observed in analyzing the cliques. The revealed closenesses established a group of "French" families which was relatively distinct from a group of "German" families. That was the case of isolated alliances and not relinked ones. The criteria of relinking thus appears more restrictive and more demanding. There are probably closenesses among the French families, but they perhaps did not have the time to reveal themselves through relinked marriages. The energy and the size of the Jewish community of Frankfurt notably explains this fidelity between German families, whose economic ease and influence greatly expand in the 18th century.

Conclusion

The goal of this study was to analyze the matrimonial network of the Parisian Jewish upper class in the second half of the 19th century, a study which carried over into its genesis and evolution in the 20th century. Observing the network of the same group of actors for the period 1770-1950 clearly shows that this period was in fact the most productive because the relationships engendered by the alliances lead to a very strong interconnection between dynasties. During the initial period (1770-1849), the family dynasties which would later compose the Jewish upper class in the second half of the 19th century had not yet all arrived in Paris. The fusion between families of varied geographic origins had not yet taken place. The matrimonial market remained limited to the regional scale. After 1900, this same network declined: numerous actors moved away or disappeared and the links uniting them, while still existent, were weakened. Perhaps a network of alliances among the Jewish upper class population existed in the 20th century, but it consisted of families other than those who lead the way in the late 19th century.

In the second half of the 19th century, a single geographic origin contributed to developing the alliances which united those families who were primarily in the banking or finance business. German banking families, a majority of whom came from Frankfurt, formed the core of this milieu in which other families, whether of French or other European origin, would incorporate. The traditional closeness between German families would endure upon their arrival in Paris. The network is, however, fairly extended even if certain dynasties seem to have maintained more intense links.

Clearly the origin of the links and their evolution merits study. We have identified the role of the place of origin and the professional activity as factors which explain alliances between dynasties. For those families originally from Frankfurt, this geographical and economic identity clearly play an important role. Other explanatory variables must be taken into account, but the data collected to date does not lend itself to an exhaustive treatment of the question. Future analyses will include, for example, the date of arrival in France, titles of nobility held, participation in public life through elected office, etc.

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