

Article

Female Connectors in Social Networks: Catharine Minnich (Died 1843, Pennsylvania)

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Abstract: The thesis of the article is that taking a social network approach to genealogical problems of origin and parentage can, where applicable, result in two noteworthy benefits. The first benefit is that it may more quickly and effectively lead to matrilineal kin by helping to reconstruct a kinship network. The second benefit is that it will lead to a deeper understanding of social circles in which a husband and/or wife participate. This approach turns the usual genealogical practice of unravelling a female's position in a cluster in relation to her husband on its head—the male's position in a social network is reconstructed by backtracking one of his significant females (wife, mother, or sister). As background, the article briefly discusses networks, the importance of women as connectors in kinship networks, and cultural practices of kinship, in this case, eighteenth-century Germany/United States. It then presents a case study of Catharine Minnich, a Pennsylvania woman of German descent. In addition to analyzing relations by blood and marriage, it recognizes the important role of baptismal sponsors in aligning a multi-family network.

Keywords: cluster; FAN; hinge-pin; Kendel; Nehlich; network; Schleich; Schlosser; sponsor; Wirth



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1. Introduction

This article begins with an overview of the theories of social networks and females as key connectors in kinship networks. That theoretical foundation underlies the methodology of identifying women who played key roles in building and nourishing family alliances that formed extended kinship networks in some cultures during some periods of time. The article illustrates how to implement the methodology and unpacks the theories of networks and female connectors using a case study of Catharine Minnich, a Pennsylvania woman who died in 1843.

2. Theory and Methodological Practice

2.1. Networks, Female Connectors, and 18th-Century German Kinship

Genealogical problems of origin, parentage, and related matters are difficult when direct evidence cannot be found, records normally used to track that kind of information are missing, surnames of research subjects are common, or the ancestors are females with unknown maiden family names. Ensuring identity is challenging. In these kinds of situations, experienced practitioners often follow the FAN (friends or family, associates, neighbors) principle, or approach (Mills 2012a, 2012b, 2012c), to find collateral lines or others whose migration paths or origin may be parallel and more traceable because of relevant extant evidence. These are people with whom the research subject may have interacted or with whom the ancestor had something in common such as belonging to the same society, military unit, church, or neighborhood. Initially, many of these contact people are associates only until one finds evidence that they were friends, neighbors, or relatives. A researcher hopes to identify relatives or close friends who will help lead to or locate geographic origins and parents.

The FAN approach is sometimes known as cluster analysis (Lenzen 1994, pp. 17–31; Litchman 2007; Mills 2012a) in which objects, in this case people, are grouped together

using some attribute, the similarity of which may prove useful in leading to an answer to a researcher's question. Clustering is a kind of data exploration to facilitate looking for patterns or structure in the objects or characteristics gathered for research. One should be cautious not to rely exclusively on groups such as neighborhoods, however. While William Litchman is correct in the most general sense that people followed one another in migrations, usually migrated in groups, and that neighbors often came from the same place (Litchman 2007, p. 103), it may be that neighborhoods, broadly defined groups, and collections of people are too amorphous to use as opportunities to effectively search for origins (Wellman 1988, p. 37).

Although it is difficult to find genealogists who write about the relation between the FAN club, or cluster analysis, and networks (De Nooy et al. 2005, pp. 234–35), the FAN approach intersects with social networks. A person's associates, especially the close and familiar ones, belonged to a social network. A social network is a personal community made up of people (called nodes in network analysis) and connections, interrelationships, or interpersonal interactions (called edges in network analysis). A social network is a community structure composed of personal nodes and edges.

The thesis of this article is that, for difficult origin and parentage problems, it is sometimes beneficial to use network analysis. This does not conflict with FAN or clustering but may be considered a nuanced, more refined approach. Two benefits may result in cases where network analysis is applicable. First, network analysis may more efficiently and quickly lead to a solution. Second, it yields a coherent explanation for why the associates were such. It does this by reconstructing kinship networks. The more genealogically important social network one attempts to uncover is a kinship network. This leads to an increased understanding of the reasons why the ancestor was linked to the close associates one finds in FAN research. Of course, success depends on correctly hypothesizing kin connections, finding available records, and on the era and culture to which the ancestor and network belonged. Kinship networks sometimes have characteristics that show during record searches and analysis of evidence.

This article treats kin in the family genealogical sense, including relations by blood and marriage, but it is important to realize the value of other conceptions of kinship (Strathern 2020; Sahlins 2013; Viveiros de Castro 2015). The prevailing view among genealogical practitioners (and anthropologists in the late nineteenth and early twentieth centuries) (Morgan [1870] 1997; Rivers 1900; Feeley-Harnik 2001; Helmreich 2001) is that kinship is understood in terms of genealogy and biological blood relations as defined by procreation. That view conceives of genealogy and relations as kinship. For that view, genealogical structure is synonymous with kinship nomenclature (Farber 1981, p. 41). David Schneider viewed kinship as belonging to the two precincts of nature (biological descent by blood) and law (marriage), and both were founded on sexual procreation (Schneider 1980, pp. 23–27). The more recent consensus among anthropologists and sociologists is that kinship is social, not given at birth (Durkheim 1965; Strathern 1988; Lévy-Bruhl [1910] 1985). In other words, kinship is a process, not a state of being (Bamford and Leach 2009, p. 10). This includes an emphasis on personhood and gender (Battersby 1998; Carsten 2001, pp. 1, 18–19; Butler [1990] 2007), and genealogy as producing kinship (Nash 2004, p. 5; Kramer 2011, p. 381).

This article will stress the role of women in networks, especially women's role in kinship-based networks. This is particularly evident in some cultures and eras, and one of those is eighteenth-century German culture, both in Germany and in countries into which Germans of that century immigrated, such as America.

2.2. Networks

Many things pass through social networks, including material resources that are consumed or used to produce goods, but also friendship, love, money, power, ideas, and emotional support (Kadushin 2012, p. 4). Some networks coalesce around homophilic characteristics, but in other cases interests or activities may be influenced by the networks

to which a person belongs. Some network connections are primarily unidirectional, but closer connections are characterized by reciprocity in which financial gain and power are unimportant. The density of a network is measured by the number of connections in a network, which tends to be higher in kinship networks. Sometimes a dense, homophilic network or network block is said to be cohesive (De Nooy et al. 2005, p. 61). A person commonly participates in more than one network, and this multiplexity is often reflected in interconnections among the networks.

Networks are often used to get things done, as in economic exchange and building and improvement projects. They are also used for social interchange and support (Kadushin 2012, p. 58). Dense networks, such as extended family connections, are built on trust (Kadushin 2012, p. 60).

Network scholars have reached a consensus that community is not a location or neighborhood but a network of ties, or personal community (Wellman 1982, p. 63). Network analysis explains social behavior by the structural patterns of these communities (Wellman 1982, p. 63; Wellman 1988, pp. 20, 31).

Kinship networks are characterized by mutuality (Wellman et al. 1988, p. 167), involve emotional and physical support, and are long-lasting rather than transactional. Marriage is the most intimate of social ties in many modern Western societies (Simmel 1950, pp. 126–27, 146; Rytina 1982, p. 81). Family ties, built largely on marriage, are strong and characterized by a motivation to help in multiple ways (Granovetter 1982, p. 113). The exchange relation is longitudinal, enduring over time, with no accounting of debts or payments (Cook 1982, p. 178). Invisible bonds tie families together in a mesh of connections (Scott 1988, pp. 109–10). This article will offer a few simple models to bridge the theoretical gap between network analysis and genealogical practice. However, it will also employ empirical observation of genealogical evidence to apply the models that explain the reasons for particular network block structures (Newman et al. 2006, p. 5).

In the past (and present), women played an important role in network connections, especially in kinship networks (Stone 2010, p. 207). In the culture and time period relevant to this article, men participated in public affairs and work outside the home, while women were usually limited to private affairs and practiced social connections unrelated to work (De Beauvoir 1949, pp. 571, 584; Quataert 1986, p. 4). Thus, women often filled the role of social connectors, taking responsibility for the social aspect of binding families together (De Beauvoir 1949, pp. 571, 584; Chodorow 1978, pp. 135, 167, 175–78, 201; Mazey and Lee 1983, p. 24; Cott 1997, p. 165; Antonucci 2001, pp. 432–34; Smith 2008). They bring a child into the social world (Cavarero 2014, pp. 4, 13, 23) and connect their child to the generation older than the mother (Cavarero 1995, p. 82; Guenther 2006, pp. 99–101, 106–7, 129). Of course, gender roles evolve over time and within a person's life cycle, and they vary in other cultures (Fortes 1969). Studies of some other patrilineal cultures demonstrate that women connected men in kinship networks. For example, Nepalese Brahman women arrange marriages to connect men (Stone 2010, pp. 93–109, 207). Another example is the Nuer, who not only draw men together but also link their children to nonlineage kin (Stone 2010, pp. 82, 84).

In many cultures and eras, a woman (or women) served as the fulcrum(s) on which members of a family closely interrelated (Hanawalt 1986; Cott 1997). In the first half of eighteenth-century Germany, women played a key role in configuring alliances among families (Sabeian 1998, p. xxvi). They were the center of coordinating kinship ties and took on the responsibility for family networks, moral and material support, and continuity of family organization and structure (Sabeian 1998, p. 491).

Among the activities in which they engaged was marriage strategy to achieve these network goals. Their own and their siblings' marriages, especially those of their sisters, were important for establishing and strengthening extended family networks. Important goals of marriages were to integrate and tighten bonds and to increase strategic alliances for material and social support (Sabeian 1998, pp. 12, 491; Stone 2010,

pp. 144, 200; Strathern 2020, p. 41). This became increasingly important toward the middle of the eighteenth century as affinal links took precedence, and as individuals were bound together in a network of in-laws (Medick and Sabeau 1984, p. 173; Sabeau 1998, p. 16). Success at accomplishing a growing and stronger kinship network led to establishing a cooperation of men for growing crops, managing land, sharing equipment and farm animals, and performing other productive activities (Sabeau 1998, p. 125). The kinship network was the foundation for inheritance; identity (Rebel 1983, pp. 65–66; Robisheaux 1989, pp. 126–46; Sabeau 1998, p. 16); and the free interchange of daily goods, labor, and social and emotional support in good times and bad (Medick and Sabeau 1984, p. 13). Kinship, after all, was important for socializing, recognizing, and ordering related people into intelligible hierarchies (Sabeau 1998, p. xxv); for building ties that bound (Sabeau 1998, p. xxvi); and for other economic benefits such as division of labor, dissemination of property and consumable goods, and structuring households (Mitterauer 1995, p. 43; Sabeau 1998, p. 3). Richard Rudolph believed that labor requirements were the major consideration of peasant families in Europe working out household composition strategies (Rudolph 1995, p. 10). Two primary goals of those families were maintaining and expanding property for the family in future years, and the welfare of the family at a given stage in the family life cycle (Rudolph 1995, p. 10).

Baptism was the occasion for naming a child and thus connecting the infant and the person after whom the child was named, as well as to the baptismal sponsors. Baptism signaled acceptance of the baby into the domestic unit, family network, and society. Sponsors (godparents) either were brought into the family network by serving in that role or reinforced the network if they were already kin by blood or marriage. A godparent was a kind of co-parent and possibly a substitute parent in a crisis situation, such as the death of one or both of the parents (Sabeau 1998, p. 23). Godparents helped sustain and strengthen the kin network (Sabeau 1998, p. 132).

Godparents were important ritual kin (Wiesner-Hanks 2013, pp. 81–82), including for political connections (Sabeau 1998; Guzzi-Heeb 2009, pp. 111–12). Early on, godparentage could extend kinship beyond that established by blood and marriage (Theibault 1995, pp. 123–24; Sabeau 1998, p. 23). However, towards the middle of the eighteenth century, godparentage was focused on immediate relatives (Sabeau 1998, p. 174). Women tended to emphasize close sibling relations in their choice of sponsors for their daughters (Sabeau 1998, p. 188). *Compadrazgo* in Mexico assumes the role of a central institution in community society. (Foster 1969; Nutini and Bell 1980, p. 11). One important occasion of ritual, or fictive, kinship is celebrated in the initiation of baptism that established long-term social and economic relationships and a network (Nutini and Bell 1980, p. 54) that tied together the *padrino* (godfather), *madrina* (godmother), *ahijado* (godson), or *ahijada* (goddaughter) with the parents of the child. This is a permanent relationship usually ended only by death (but occasionally by marriage), and includes implicit patterns of behavior, rights, obligations, and mutual respect (Nutini and Bell 1980, pp. 62–63, 67–69, 71).

In eighteenth-century Germany, names of boys and girls were chosen from among the living, not the dead (Sabeau 1998, p. 162). A majority came from the generation of the grandparents of the infant (Sabeau 1998, p. 163), but some were of the infant's parents' siblings. First-born daughters were most frequently named in honor of the mother of the infant, but some were named after the godmother (Sabeau 1998, p. 163), and others after the infant's maternal grandmother.

A few simple diagrams will prepare for the subsequent discussion and case study. Because of the social roles of men in the public world of past centuries, and the social practices within marriage regarding ownership and participation in business, military, and other affairs, most documented transactions and events record male to male associations and exchanges (Salmon 1986; Cornett 1997) (Figure 1). However, some of these A–B

interactions were with kin, and some were made possible by a woman with whom male A had a close connection such as a mother, sister, or wife.

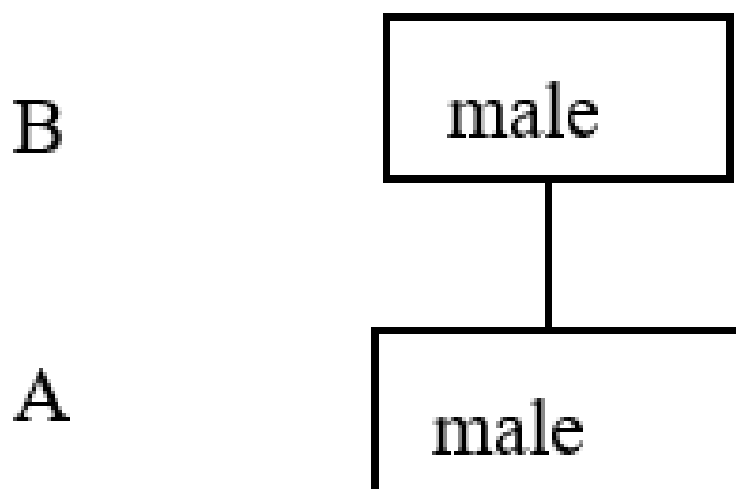


Figure 1. Typical Male–Male Associates.

In a common variation, the connection between A and B was through C, the wife of A. C was related to B, and facilitated A's interactions with B (Figure 2). Different situations may contain signals that this is a possibility, and one is an interaction that occurred soon after marriage.

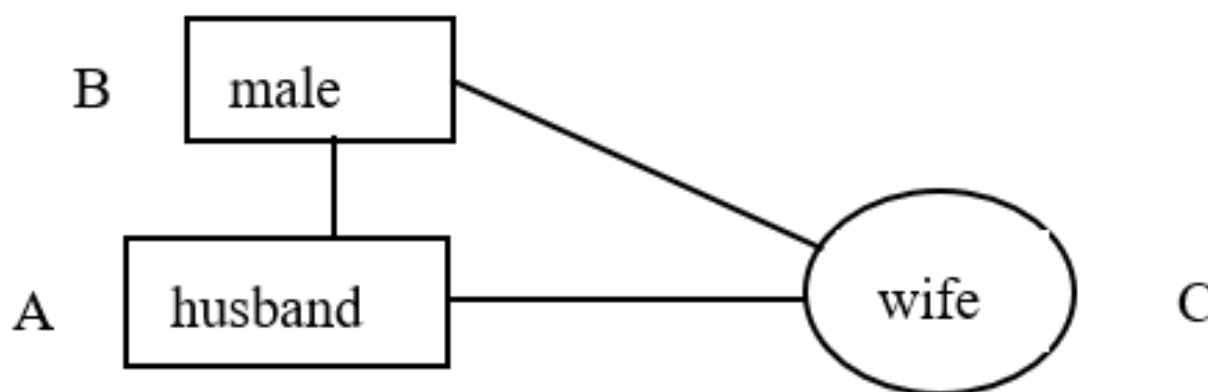


Figure 2. Triad through a woman.

Other situations may give plausible indication of a kin relation to a woman. Sponsors (or at least one of the sponsors) of a daughter's baptism, especially a first-born daughter, are strong possible hypothetical kin. Sponsors, or godparents, were significant ritual kin in some cultures. Figure 2 illustrates a female-based kin triad.

Tetrads were also common. A tetrad may more accurately reflect a network building block structure. In Figure 3, A's association with B was facilitated by C's kinship relation to D and D's kinship relation to B (Simmel 1950, pp. 135–42, 145–53). In all of these examples, the kinship relation may be affinal or consanguinal.

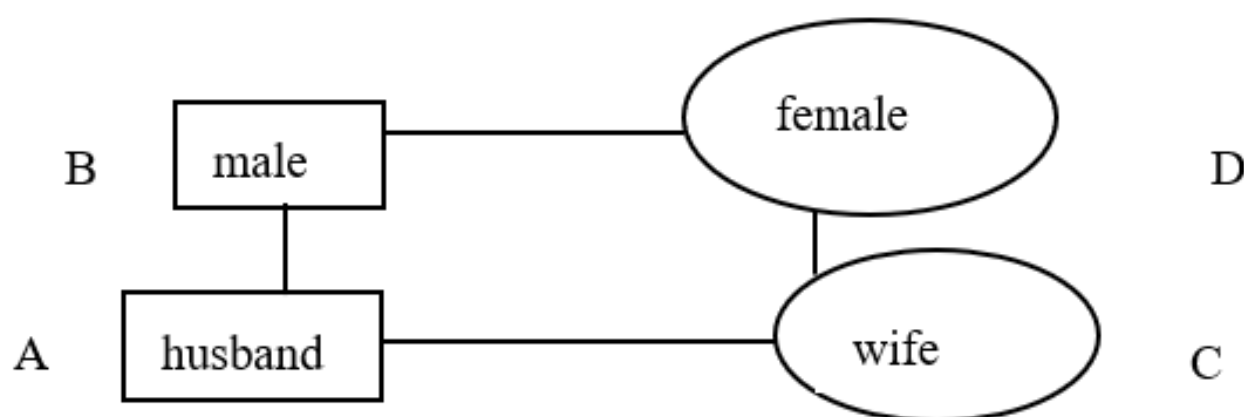


Figure 3. Tetrad through women.

In either case, hypothesizing the central role in the network block structure leads to B in the case of a triad, and to D and B in the case of a tetrad. This hypothetical network block structure may be proved or disproved by evidence, but if proved and corroborated, often leads more directly and quickly to an ever-expanding kinship network and to an explanation and deeper understanding of the reasons behind the choice of associates of various kinds. Rather than revealing just a cluster or FAN group, a kin-based social network is uncovered.

3. Case Study: Catharine Minnich (Died 1843) of Adams County, Pennsylvania

3.1. Introductory Remarks

The case study to which this background information and theoretical and methodological introductory remarks will be applied involves Catharine Minnich, wife of Michael Minnich. The case study exemplifies a methodology that concretizes how the theories of social networks and female connectors can identify female connectors upon whom a genealogist may reconstruct a kinship network, even when little other information is available.

Catharine Minnich died on 10 December 1843, and according to her gravestone in Bender's Lutheran Church Cemetery in Adams County, Pennsylvania, U.S., was 78 years, ten months, and four days old at death (FindAGrave 2021, memorial #44,320,117), implying a birth date of 6 February 1765. The practical genealogical objectives are to identify her parents and origin. The initial focus will be on the geographic area near where she was buried, but at a time close to when she and Michael Minnich married.

The case study begins by hypothesizing that some social interactions between either a husband, in this case Michael Minnich, and others, or between a wife, in this case Catherine Minnich, and others, or the couple and others is based on a kin relation, in many cases of the wife. In the case study, preference is given to social network relations that occurred soon after or at about the time of a marriage because that is when one would expect that approximately one-half of a newlywed's social relations were between the wife and others (Fortes 1969). However, given the importance of women's relations in kinship networks in contrast to men's relations in the public sphere, it is more likely that kinship connections of a newlywed were through the wife. The other reason is that, early in a marriage, fewer network relations existed as a result of the man and wife interacting with others as a couple, although one can find evidence of an engaged man and woman acting as a couple in the sponsorship of infant baptisms. As will be seen, some social interactions are given preference for the wife's potential hinge-pin role. The hinge-pin metaphor alludes to a woman's crucial role in building the family social network and to her serving as a connector between or among family members. Clearly, hypotheses may be contradicted by evidence, but pursuit of the more promising hypotheses may turn out to be accurate and result in two benefits for the genealogical practitioner, as mentioned in the introduction. As mentioned,

it or they may more quickly and effectively lead to matrilineal relatives. If successful, it or they, and the process of pursuing it or them, will lead to a deeper understanding of the networks in which the mother/wife played a key part. This approach will enhance a genealogist's understanding of social circles composed largely of kin of the wife, and this explains why some people were associated with the husband and/or wife.

3.2. Early-Marriage Social Interactions

Three sets of recorded early-marriage social interactions involving Michael Minnich occurred soon after or at approximately the same time as his marriage to Catharine. Reportedly they married on 16 August 1785 (ancestors.familysearch.org). That date is plausible because their first child, Catarina, was born on 3 July 1786 (Bender 1786–1860, p. 9). The first set comprises baptismal sponsors of their children (Table 1). The second set consists of baptismal children's parents who asked Michael and Catharine to sponsor their infants. The third set includes a will and estate documents of Joseph Nehlich in which Michael is named. Many of the sponsorship data are recorded in Bender's Lutheran Church where the married couple attended and had most of their children baptized. That church is an important site for social interactions in which the husband and wife engaged.

Table 1. Michael and Catharine Minnich's Children and Their Baptismal Sponsors.

Children	Birth Date	Sponsors
Catarina	3 July 1786	Christian and Maria Barbara Wert
Maria Barbara	19 October 1787	Peter and Catarina Spengler
Michael	22 August 1789	Unknown
Elisabeth	5 November 1791	Heinrich Nehlich and wife
George	22 July 1793	Unknown
Rebecca	1 October 1795	Conrad and Anna Margaretha Schlosser
Michael	27 November 1797	John and Catharine Panter
Maria Magdalena	29 November 1800	William and Maria Magdalena Rex
Daniel	28 February 1803	George and Hanna Herzel
Johannes	30 November 1805	Johannes and Christine Schlosser
Henry	3 May 1808	Henrich and Molly Schleich

In the first set, Michael and Catharine's first child was a daughter and thus a likely opportunity to discover a network connection revolving around Catharine, particularly because that child was named Catarina, most likely after the infant's mother. Catarina is a German form of the name Catharine, and their second daughter's name, Maria Barbara (Bender 1786–1860, p. 9) is the German form of the anglicized Mary Barbara. Those facts and the fact that Michael and Catharine attended a German-speaking congregation are evidence that Catharine's heritage was German. That is particularly important for building out her network structure following what was learned regarding eighteenth-century German familial alliances.

Sponsors were significant in that culture for strengthening and expanding kinship networks, whether affinal or consanguinal. In the case of first-born Catarina, the sponsors were Christian Wert and Maria Barbara (Bender 1786–1860, p. 9). Maria Barbara was not specified as Christian Wert's wife, but the absence of her surname enables the reasonable conclusion that she was. For the reasons already given, it is a plausible hypothesis that Christian Wert and Maria Barbara Wert were kinship network connections of Catharine Minnich. That hypothesis gains strength when one observes that the second-born child of Michael and Catharine, another daughter, was named Maria Barbara, as mentioned. The name Maria Barbara occurs twice—as the female sponsor of the first daughter and as the name given to the Minnich's second daughter.

At the very beginning of this network research, one cannot tell if any of the other sponsors of Michael and Catharine’s children may be likely candidates for kinship members of Catharine’s network, although one should take special note of the sponsors of the other daughters’ baptisms. Those are Heinrich Nehlich and wife for daughter Elisabeth ([Bender 1786–1860](#), p. 14), Conrad Schlosser and Anna Margaretha for daughter Rebecca ([Weiser 1791–1874](#), p. 4), and William Rex and Maria Magdalena for daughter Maria Magdalena ([Bender 1786–1860](#), p. 24). One should also note that son Johannes’ sponsors were Johannes Schlosser (another Schlosser) and Christine ([Bender 1786–1860](#), p. 24). Thus, as research progresses the surnames to keep an eye out for in terms of connections analysis and network build-out are Wert, Nehlich, Schlosser, and Rex.

The second set consists of six baptisms for which Michael and Catharine Minnich served as sponsors (Table 2). They were Catarina of Peter and Catarina Spengeler (born 1787) ([Bender 1786–1860](#), p. 9); Saara of John and Susanna Klein (born 1798) ([Parish Register of Benders Church n.d.](#), p. 61); Wilhelm of Wilhelm and Maria Magdalena Rex (born 1801) ([Bender 1786–1860](#), p. 24); Salome of George and Katharina Schlebach (born 1801) ([Bender 1786–1860](#), p. 24); Michael of Johann and Elisabeth Klark (born 1806) ([Bender 1786–1860](#), p. 31); and Elisabeth of Johannes and Christina Schlebach (born 1806) ([Bender 1786–1860](#), p. 31), the same couple who sponsored the Minnichs’ son Johannes. It is noted that Henrich Schlebach and Molly were sponsors of Michael and Catharine’s youngest son, Henry ([Bender 1786–1860](#), p. 35). At this point, none of the sets of parents of the six infants sponsored by the Minnichs stand out as a female connection point, but research should be pursued on the Schlebachs as possible kinship nodes in Catharine Minnich’s network.

Table 2. Children Whose Baptisms Michael and Catharine Minnich Sponsored.

Children	Birth Year	Parents
Catarina	1787	Peter and Catarina Spengeler
Saara	1798	John and Susanna Klein
Wilhelm	1801	Wilhelm and Maria Magdalena Rex
Salome	1801	George and Katharina Schlebach
Michael	1806	John and Elisabeth Klark
Elisabeth	1806	Johannes and Christina Schlebach

The third event provides additional avenues for research (Table 3). That possibility is strengthened by noting that it occurred in 1786, the year of the birth of Michael and Catharine’s first child, Catarina. Joseph Nehlich wrote his will on 29 January 1786, and the will was proved on 27 March 1786 ([Neely/Nehlich 1786](#)). It will be recalled that the surname Nehlich was the same as the sponsors for Michael and Catharine’s third daughter, Elisabeth. Thus, there is a second reason for following up on the Nehlich family as a potential kinship network connection through Catharine Minnich—surname and timing. It should also be mentioned that in 1786, Michael and Catharine lived in Menallen Township in York County ([Tax Menallen 1786](#), image 266), Pennsylvania, and now in Adams County ([Long 1996](#), p. 18). Joseph Nehlich, spelled Neely in his will and in some tax records ([Tax Tyrone 1783](#), image 86) (there were “real” Neelys in the area at about that time) ([Tax Tyrone 1785](#), image 435), lived in Tyrone Township at the time he wrote his will ([Neely/Nehlich 1786](#)). Tyrone Township bordered Menallen Township to the east (Figure 4). Michael Minnich lived in Tyrone Township in 1784 and 1785 ([Appeal Tyrone 1784](#), image 86; [Tax Tyrone 1785](#), image 7). Thus, there is coincidence of surname, place, and time between the Minnichs and Joseph Nehlich.

Table 3. People Involved in Joseph Nehlich's Estate.

Role	Person
Executor	Christian Wirt
Guardian for son Joseph	Christian Wirt
Guardian for son Peter	Michael Minnich
Witness to will	Michael Minnich
Guardian for son William	William Miehl
Guardian for daughter Catrina	-ikles Dedrick Jr
Guardian for daughter Mary	Casper Snar
Guardian for son Henry	George Miehl
Witness to will	George Miehl
Pre-deceased wife	Christina Barbara
Witness to will	Thomas McCashlen

**Figure 4.** Map of Present-Day Adams County, Pennsylvania, courtesy of Ed McClelland.

Joseph Nehlich had six minor children at the time of his death, and each was named and assigned a guardian in his will. Christian Wirt was named the guardian for Joseph's son, Joseph ([Neely/Nehlich 1786](#)). Thus, Christian Wirt/Wert was both the sponsor of Michael and Catharine's first-born child, daughter Catarina, and the guardian of Joseph's son, Joseph. These relations form a simple triangular network, another significant step forward in determining the network structure. That the man named as guardian of Joseph Nehlich's son, Joseph, was the same person who sponsored Catharine's first-born daughter, named after her, raises the likelihood that Christian Wirt belonged to Catharine's kinship network.

Joseph named Michael Minnich as guardian of his son Peter (Neely/Nehlich 1786). Michael was also a witness to the will (Neely/Nehlich 1786). Other guardians were George Meals (Miehls) for son William (Neely/Nehlich 1786), Nicles Dedrick (probably Nicolaus Diedrich) Jr. for daughter Catrina (Neely/Nehlich 1786), Casper Snar (elsewhere spelled Schnerr) for daughter Mary (Neely/Nehlich 1786), and George Meals/Miehl for son Henry (Neely/Nehlich 1786). George Miehl was also a witness to the will (Neely/Nehlich 1786). Christian Wert/Wirt/Wirth was named executor of the estate (Neely/Nehlich 1786). Thus, Christian Wirth played three significant roles: sponsor of the Minnich's first child, guardian of son Joseph of Joseph Nehlich, and executor of Joseph's will/estate.

The hypothesis to be pursued is that Catharine Minnich is the female hinge-pin tying together this growing network structure, and that it is a kinship alignment network. It appears that Joseph Nehlich's wife predeceased him. Her clothes were mentioned in his will (Neely/Nehlich 1786), and his estate file includes the costs of her funeral and coffin (Neelich 1792). Her married name was Christina Barbara Nehlich. Given the importance of women in many social networks, including in eighteenth-century German networks, her role in this network structure needs to be explored.

3.3. Northampton County: Initial Research

Research on some of these York County hypothesized networked families quickly leads back to Northampton County, Pennsylvania, mostly in an area now in Lehigh County. The same Wirths, Nehlichs, and Schlossers, and Caspar Schnerr all resided there. Because of his triple role in the initial network, the starting point for Northampton County research is Christian Wirth. A number of revealing baptisms and baptismal sponsors are recorded in Schlosser's Union Reformed Church, located in Whitehall Township, now in North Whitehall Township.

Maria Barbara, daughter of Jacob and Christine Wirth, baptized 21 May 1775, sponsored by Christian Wirth and Maria Barbara Nehlig (Hinke 1765–1841). Christian Wirth is connected with Maria Barbara Nehlig. They were not married to each other at that time, but they were likely the couple who sponsored Catarina of Michael and Catharine Minnich eleven years later. This is yet another association of Christian Wirth with a Nehlich/Nehlig/Nelig.

Joseph, son of Joseph and Christine Barbara Nelig, baptized on 25 December 1775, was sponsored by Christian Wirth and Barbara Nelig (Hinke 1765–1841), yet another connection between Christian Wirth and the Nehlichs. Christian and Barbara Nelig were still not married but associated with one another in another baptismal sponsorship, a frequent indication of betrothal. This is the baptism recorded of the infant Joseph, son of Joseph and wife, later to be named in Joseph Nehlich's will with Christian Wirth assigned as his guardian. Christian Wirth was the sponsor for Joseph of Joseph's baptism, and guardian of Joseph after the death of his father. These two ritual kinship roles were significant in German customs of the eighteenth century (Sabeau 1998, pp. 23, 143, 240). Yet to be determined is the precise relation between Maria Barbara Nelig and Joseph Nelig.

On 13 October 1776, Christian Wirth and Barbara sponsored Christian Wirth, son of Balthasar and Anna Wirth (Hinke 1765–1841). Barbara's surname is not recorded, indicating that she and Christian Wirth had married by then. Thus, the connection to Joseph Nelig (estate) apparently was through Maria Barbara (Nehlich) Wirth. This enhances the probability that there was a network connection between Catharine Minnich and Maria Barbara (Nelig) Wirth, and if so, Catharine Minnich would be the network hinge-pin in the sponsorships of some of her daughters, and in the guardianships, witnesses, and executor of Joseph Nelig's will/estate. That remains to be corroborated and proved.

Joseph and Christina Barbara Nelig presented son Henry for baptism on 20 September 1778 (Hinke 1765–1841). The sponsors were John Nicholas Wirth and Margaret Nelig. This is yet another network connection between a Wirth and a Nelig, and also a network connection with Joseph and Christine Barbara Nelig.

Christian and Barbara Wirth sponsored John Schlosser, son of Conrad and Margaret Schlosser, on 30 September 1781 ([Hinke 1765–1841](#)). This connects the Schlosser family observed in York County. Recall that Conrad and Anna Margaretha sponsored Rebecca Minnich in York County. This confirms the inclusion of that Schlosser branch into this ever-expanding network.

Two months later, on 11 November 1781, John Schlosser and Christina Wirth sponsored Susanna, daughter of Christian and Barbara Wirth ([Hinke 1765–1841](#)).

On 21 September 1783, Christian and Barbara Wirth presented a son, J. Jacob, for baptism ([Hinke 1765–1841](#)). The sponsors were Jacob Wirth and Catharine Nelig.

On 11 October 1783, Conrad and Margaret Schlosser presented daughter Maria Barbara to be baptized ([Hinke 1765–1841](#)). The sponsors were John Schlosser and Catharine Nelig.

A reexamination of Schlosser Church records pinpoints the origin of the hinge-pin network role played by Catharine Minnich. Maria Catharine, daughter of Henry Nelig and his wife Maria Barbara, was baptized on 2 March 1766 ([Hinke 1765–1841](#)). This is one year later to the day than her birth date, calculated from her death date and age engraved on her gravestone ([FindAGrave 2021](#), memorial #44,320,117). The age on the gravestone was incorrect by exactly one year. The Maria Catharine born on 6 February 1766 is the minor child, Catharine, named in Henry Nehlich's will. Catharine Minnich's parents were Henry Nehlich and Mara Barbara (—), surname unknown at this point in the research.

A key document for furthering understanding of this network is the will of Henry Neile/Nehlich, yeoman of Whitehall Township, Northampton County ([Neile 1773–1774](#)), Pennsylvania. Other related estate papers are also informative. The will was written on 16 December 1773 ([Neile 1773–1774](#)) and proved on 6 June 1774 ([Neile 1773–1774](#)). In the will, Henry Nehlich names his wife Mariah Barbara, who is thus identified as the same Maria Barbara Nehlich found in Schlosser Church records. He named as executors Mariah Barbara and friend and relation John Hunsicker of Heidelberg Township ([Neile 1773–1774](#)). He appointed Paul Polliard as guardian of his sons Paul and Henry ([Neile 1773–1774](#)), and Dewalt Kendel and Peter Kendell as guardians of Margaret, Catharina, and Eve ([Neile 1773–1774](#)). The final settlement is dated 11 June 1776 ([Estate File Henry Neile 1774](#), final settlement cover sheet), and includes disbursements to Ulrich Wert and Christian Wert, as well as to Peter Kennel and Dewalt Kennel ([Estate File Henry Neile 1774](#), final settlement disbursements).

On 18 March 1784, Christian Wirth of Whitehall Township, Northampton County petitioned the probate court to resettle and adjust the accounts of the estate of Henry Nelich, and to distribute the proceeds to the heirs ([Wirth 1784](#), image 336). He did this as "one of the heirs of Henry Nelich," only possible because he had by then married Maria Barbara Nehlich. This is corroborated by the record of the marriage of Christian Wirth and Barbara Nelig on 9 April 1776 by Rev. Abraham Blumer ([Blumer 1773–1787](#), p. 15, image 417). Christian Wirth married Henry Nehlich's widow, Maria Barbara.

3.4. Sponsors

Other Northampton County sponsorships show a crisscross pattern linking Nehlichs, Kendels, Wirths, and Schlossers. These sponsorships reflect affinal and consanguinal relations, strengthen and expand interfamily ties, and show multiple women holding key connectivity roles in the broader multi-family social network. Sponsorships had real consequences and affected people's behavior as it involved decisions regarding residential location, economic relations, and practical interpersonal support. Sponsorships were more than just ritual, especially in view of the proclivity toward choosing as sponsors those already linked in the kinship network. A few baptismal examples suffice to illustrate this.

Henry and Maria Barbara Nelig sponsored Maria Barbara, daughter of Diepold and Magdalene Kendel, on 26 July 1772 ([Hinke 1765–1841](#)). This is another connection between the Neligs and the Kendels. There are others.

Joseph Nelig and Christine Barbara Wirth sponsored Christine Barbara, daughter of Peter and Catherine Kendel, on 5 December 1773 ([Hinke 1765–1841](#)). Thus, Joseph Nehlich married Christine Barbara Wirth. Joseph was not mentioned in Henry Nehlich's will because he was not a minor when the will was written. He was confirmed on 17 April 1767 at Egypt Church, Whitehall Township in Northampton County ([Schumacher n.d.](#), p. 188). Confirmation occurred at about age 14, so he may have been born in about 1753. If so, he was 21 years old at the time Henry Nelig wrote his will.

Joseph Nelig and Christine Barbara Wirth sponsored Joseph, son of Diepold Kendel and Magdalene, on 13 February 1774 ([Hinke 1765–1841](#)). John Nicholas Wirth and Margaret Nelig sponsored John Nicholas, son of Jacob and Catherine Kendel, on 18 May 1774 ([Hinke 1765–1841](#)). Casper Hunsicker and Barbara Nelig sponsored Maria Sarah, daughter of Peter and Catherine Kendel, on 10 September 1775 ([Hinke 1765–1841](#)). This may be another clue to explain Henry Nehlich's mention of John Hunsicker in his will as friend and relation.

Joseph Nehlich and Christine Barbara married on 18 October 1774 ([Blumer 1773–1787](#), image 414). In his York County will, Joseph Nehlich named his children as Joseph, Peter, Henry, Mary, William, and Catrina.

Joseph was born on 16 December 1775 ([Hinke 1765–1841](#)).

John Peter was born on 17 March 1777 ([Hinke 1765–1841](#)).

Henry was born on 22 August 1778 ([Hinke 1765–1841](#)).

Maria Magdalena (Mary in the will) was born on 12 June 1780 ([Hollenbach 1740–1978](#)), and baptized on 2 July 1780, with Casper Schnerr and wife as sponsors.

These birth records further solidify the Northampton to York migration and the identity of the married couple and their children in both locations, both crucial requirements in rigorous genealogical proof. Clearly there was a network connecting the Hunsickers, Nehlichs, Wirths, Kendels, and Schlossers. It remains to determine more precisely what those were from a genealogical kinship perspective.

3.5. Marriages

Other key marriages help to fill in some gaps in the reconstructed network.

Conrad Schlosser and Margaretha Nehlig married on 10 August 1779 ([Blumer 1773–1787](#), p. 21 (image 424)). Margaretha Nehlig was a sister of Catharine Nehlich.

Johannes Schlosser and Christina Wirth married on 30 Nov 1784 ([Blumer 1773–1787](#), p. 53 (image 436)). Christina was a niece of Christian Wirth.

Heinrich Schlosser and Magdalena Kendel married on 25 Sep 1787 ([Blumer 1773–1787](#), p. 65 (image 442)). Magdalena was a granddaughter of Joseph Kendel and Sara Teller.

Maria Magdalena Schlosser and Henrich Schleich married on 6 Mar 1788 ([FindA-Grave 2021](#), memorial #41644889). Magdalena was a granddaughter of Joseph Kendel and Sara Teller.

Elizabeth Schlosser and John Kendel married. John was a grandson of Joseph Kendel and Sara Teller.

Jacob Schlosser and Maria Barbara Kendel married c 1792. Maria Barbara was a granddaughter of Joseph Kendel and Sara Teller.

3.6. Revisiting the Initial Network

After researching Northampton County, Pennsylvania, records and analyzing the evidence, one may return to York County evidence with a more enlightened understanding of the network segments observed and hypothesized at the beginning of the case study. It will be instructive to reconsider some of that evidence.

Figure 5 illustrates the kinship network between Michael, Catharine, and Joseph. Evidence in Northampton County confirms the hypothesis that Catharine was the hinge-pin of this kinship triad. In this network triadic block, she connected her husband, Michael Minnich, and her brother, Joseph Nehlich. Those two interacted closely because she served as the hinge-pin joining the two in a significant family bond. The evidence explains why

this interaction occurred and the importance of timing with respect to her marriage to Michael Minnich.

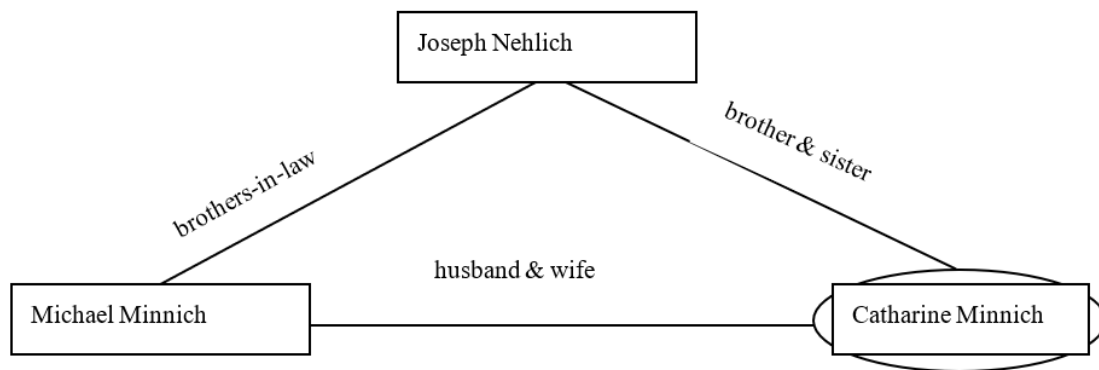


Figure 5. People Involved in Joseph Nehlich’s Estate.

The tetrad formed in the baptismal sponsorship of Minnich’s first daughter is kin-based (Figure 6). Clearly, Catharine (Nehlich) Minnich chose the godparents for her first-born daughter. The hypothetical kin relation between Catharine (Nehlich) Minnich and the sponsors for her daughter Catarina was proved and makes sense of the tetrad. The crisscross mesh becomes more complex when fully built out. It would contain more Wirths and Nehlichs, but also surnames such as Rex and Schlosser.

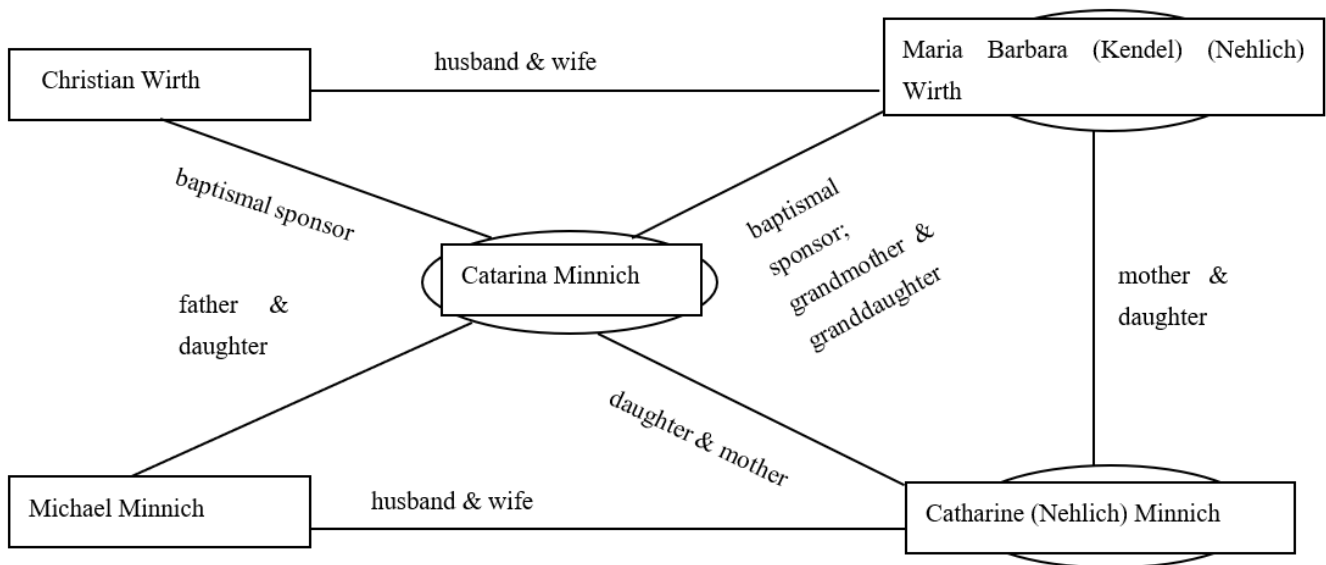


Figure 6. People Involved in Catrina Minnich’s Baptism.

The hypothesis that Christian Wirth and Maria Barbara (Kendel) (Nehlich) Wirth were kin to Catharine Minnich was strong because Christian Wirth, named as executor of the will and guardian of a minor child, was also a sponsor of Michael and Catharine’s first daughter. This is magnified when it was discovered that Christian Wirth and Maria Barbara were sponsors for the baptism of Joseph Nehlich’s son, whose guardian Christian Wirth became. The discovery that Maria Barbara was Catharine and Joseph’s mother, and that Christian Wirth and she married after Henry Nehlich, Maria Barbara’s first husband and Catharine’s father, died, confirms that those two events were based on the kinship bonds of parentage and marriage.

Catharine Minnich, who played a pivotal role in binding the network, and her mother, Maria Barbara (Nehlich) Wirth, who played another hinge-pin role, were the mother-

daughter foundation of a kin-based tetrad. Each of the two women links through their respective husbands. Women served the important role of social connectors in this kinship-based network.

The reconstruction is enabled upon discovery that Joseph Nehlich married Christina Barbara Wirth, a sister of Christian Wirth. In naming Christian Wirth as his executor, Joseph was choosing both his wife's brother and his mother's husband.

3.7. Network Reconstruction Observations

The core of this kinship network comprised the seven families of Hunsickers, Kendels, Nehlichs, Rexes, Schlebachs, Schlossers, and Wirths. The network was bound through multiple intermarriages compounded by fictional kin through baptismal sponsorships (godparents) and guardianships.

Women were the key connection points. An early hinge-pin female was Sara Teller, who first married Johannes Ulrich Hunsicker in about 1721 based on the birth date of their son Johannes in 1722 ([Diedendorf 1698–1794](#), p. 90 (image 234)). After the apparent death of her husband, Sara married Joseph Kendel in about 1724 based on the birth of their daughter Anna Maria on 13 April 1725 ([Diedendorf 1698–1794](#), p. 10 (image 254)). Heinrich Nehlich married Maria Barbara Kendel, daughter of Joseph Kendel and Sara (Teller), and named John Hunsicker as a co-executor of his will/estate. In naming him to that role, Heinrich wrote that John Hunsicker was a friend and relation. Heinrich also named his wife's brothers, Dewalt and Peter Kendel as guardians of three minor daughters. The administration bond is dated 12 May 1767 ([Estate File Joseph Kennel 1767](#)), and the final settlement is dated 7 May 1768 ([Estate File Joseph Kennel 1767](#), final settlement cover sheet). Joseph Kendel's vendue gives a glimpse of some of the networked families. Sales were made not only to Kendels (Jacob, Dewald, and Peter), but also to John Ulrich Wirth, Henry Nehlich, and Peter Schlosser ([Estate File Joseph Kennel 1767](#), vendue pp. 1–2). Henry Nehlich's final settlement also witnesses some of these families, with disbursements to Ulrich and Christian Wirth ([Estate File Henry Neile 1774](#), final settlement).

Catharine (Nehlich) Minnich and Maria Barbara (Kendel) (Nehlich) Wirth were central hinge-pins in the network. The connections persisted across generations, with Schlossers marrying Kendels, a Schlosser marrying a Schlebach, another marrying a Nehlich, and two marrying Minnichs. Wirths married Nehlichs, a Hunsicker married a Rex, and two Rexes married Minnichs.

Women connected their husbands and brothers to others in the network. Catharine tied her husband Michael Minnich to her brother Joseph. Plausibly, Catharine's mother, Maria Barbara, connected her son, Joseph Nehlich, to her betrothed and later husband's sister, Christina, and it is not unreasonable to speculate that Catharine Minnich helped arrange daughters Maria Barbara's and Elizabeth's marriages to the Schlosser brothers John and Jacob (their mother was Catharine's sister-in-law), and daughters Catharine's and Maria Magdalena's marriages to brothers John Daniel and William Rex (Catharine's first cousin was the sister-in-law of their parents). Many were married and had children in Northampton County, Pennsylvania, and later relocated to western York County, Pennsylvania, in the area that in 1800 became part of Adams County, Pennsylvania.

This complex, interwoven web was strengthened and further aligned by fictive kin relations. Catharine and husband Michael Minnich sponsored a Schlebach and a Rex. Christian Wirth sponsored a Nehlich, a Minnich, and a Schlebach. A Schlosser sponsored a Kendel. A Schlebach sponsored a Minnich. Many sponsoring couples included the spouses with the surnames of those they sponsored.

This complex network was reconstructed from hypothesized kin who were crucial associates. Some were sponsors for daughters of kin who were crucial associates. Some were sponsors of daughters of Catharine (Nehlich) Minnich, and others were guardians of her brother's minor children. Others may have been part of the kin network but not yet proven to be such—people such as Casper Schnerr, the Miehl, or Peter Spengler. See [Figure 7](#) for a partial reconstruction of this large kinship network.

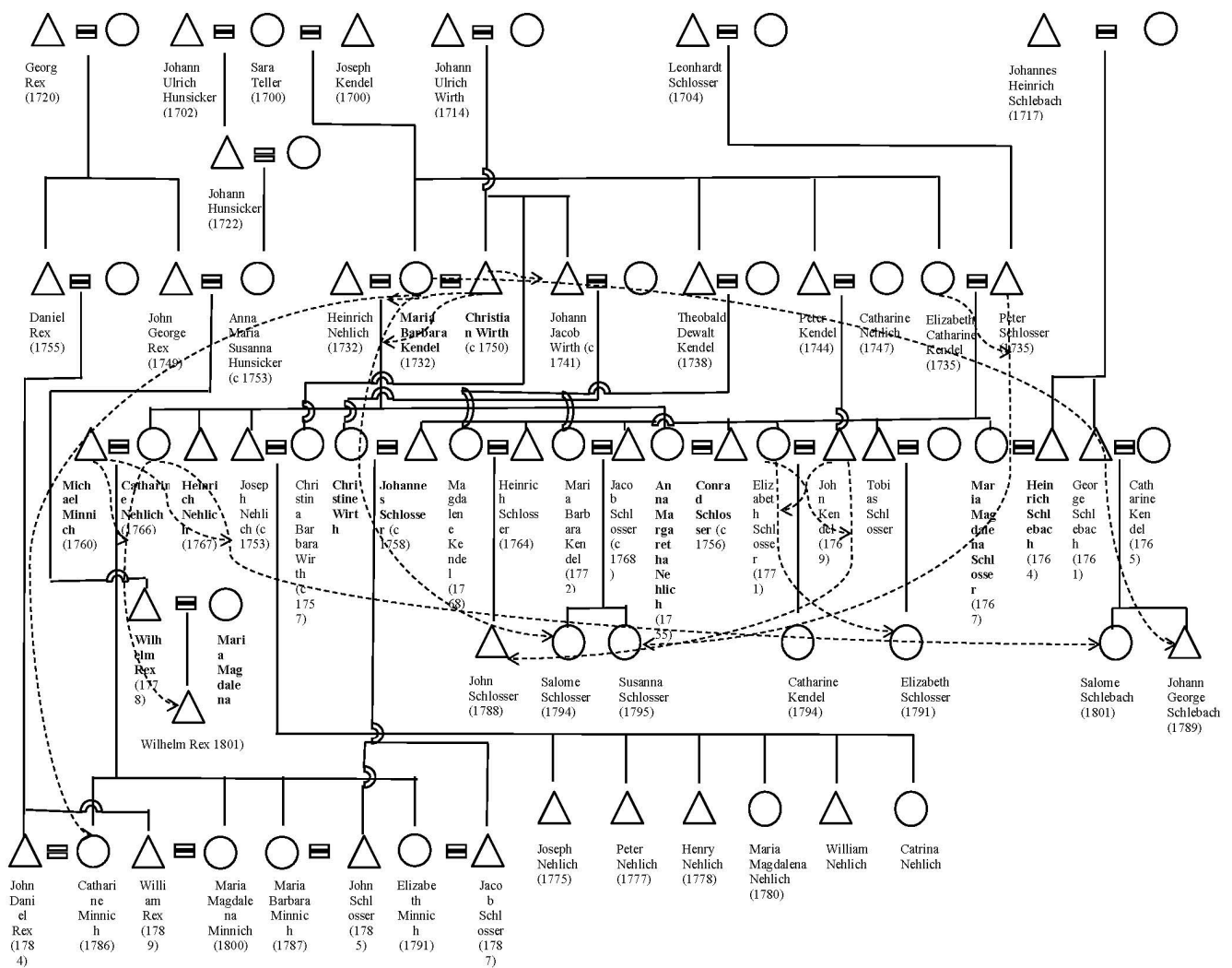


Figure 7. Partial Interfamily Tree of Case Study Kinship Network (Early-Marriage Associates in Bold Font); dotted lines represent sponsorships, triangles represent males, circles represent females; dates are birth years.

4. Conclusions

With the FAN/cluster approach, every person with whom a research subject interacted, transacted, or was associated is a candidate for answering or partially answering a key question asked by a genealogist, such as that of parentage and origin. While the FAN/cluster approach has delivered results in many difficult cases, it often requires a large investment of time and effort because of the sizable group of people to research. It often encounters more misses than hits in its hit-or-miss approach. Additionally, due to the large pool of candidates, a genealogist will often use a classification procedure to divide the associates into sub-clusters based on an attribute such a membership in a religious or military organization.

The methodology proposed in this article rests on three theoretical and historical foundations, depending on the unique research context: social networks; the particular cultural and social practices at a given place and in a given time period; and the special role played by women in kinship networks. The methodology contrasts with the FAN/cluster approach in two key ways. First, it selects a particular woman (or very small group of women) as a hypothetical connector in a kinship network. It does this by pursuing candidates who, in the particular case being researched, are in a position and at a key time in a life-cycle to influence interactions by a husband or brother, for example. This greatly narrows the pool of associates needing to be researched to solve the genealogical problem

at hand. Second, it focuses on a woman as a potential hinge-pin in a social network rather than on an attribute that determines inclusion in a cluster's data. It is relational—relations as an object of knowledge, rather than descriptive—knowledge of a domain (Strathern 2018, 2020). It is thus based on real people's interactions in a real social setting rather than on more abstract and less personal analysis of data and mathematical set theory.

In some situations, tracing and reconstructing social networks have two important advantages for genealogists over cluster analysis and the FAN principle as genealogists have applied those. Practically, it may lead to kin, origins, and parents more efficiently because the genealogical practitioner limits the research to hypothesized kinship connections. That is particularly the case if one takes care in hypothesizing promising triads and tetrads with a wife, mother, or sister as one node to explain the edges, or interactions, between a man and another male. It also provides a firm foundation for understanding connections, reasons for co-migration, and dense close-knit social networks. When one solves a genealogical problem of parentage, for example, by reconstructing a social network comprising kin, one gains a deeper understanding of and appreciation for the social lives of the involved ancestor(s).

Networks are not neighborhoods or groups, but personal, and often kin-based, communities. The keys are the interpersonal and mutual connections engendered or fostered by women who were crucial focal points and hinge-pins of an extended family network, frequently affinal-based. This is especially observed in certain eras and cultures such as the eighteenth-century German society of American subcultures comprised of or recently descended from immigrants from Germany in the eighteenth century. Indeterminate clusters do not yield as many clues to ancestral origin and identity as social networks. Moreover, when one notes the dates on which marriages or ritual kin were included in the kinship network, one comes to realize that the social network evolved over time as a dynamic process (Newman et al. 2006, p. 7; Leonetti and Chabot-Hanowell 2011). It grew from what might early on appear to be a group of disconnected nodes to a unified connected mesh, or web (Newman et al. 2006, p. 11).

Rather than shying away from female ancestral research or approaching the quest for female origins indirectly, this methodology tackles female research head on through significantly-other ties to males in an associative network. Mothers, sisters, and especially wives are potential hypothetical hinge-pins explaining some public interpersonal documented relations of men. Put differently, rather than reconstructing a female's position in a social network by following the male to whom she was attached (Mills 2012a, p. 1), this approach reconstructs a male's position in a social network by following the female to whom he was attached through marriage, being a son, or being a brother. A hinge-pin role exhibits what is sometimes referred to as centrality, referring to the key function she served in multiple triads and tetrads that formed the kinship network (De Nooy et al. 2005, pp. 145–48). The hinge-pin engendered the marriage or fictive kin by serving as a kind of broker, but the success of the brokerage depended on what initially may have been a weak tie becoming a strong tie in which the introduced or encouraged parties interacted with each other without necessarily involving the hinge-pin as a go-between (De Nooy et al. 2005, pp. 123, 125). Before launching such a research plan, it is important to recognize and understand the crucial role of social networks, not only in theoretical network analysis, but also in building out, tracing, and reconstructing relative networks for which direct and indirect evidence exists. It is also important to first understand the central role women played in instigating and nourishing extended family relations. Finally, it is important to study the role of kinship relations in the era, culture, and society to which the ancestor of interest belonged or to which her parents belonged. Cultural practices were learned and followed as part of a socialization process. Those practices were recognized for their importance to the family, and family members experienced the benefits of belonging and being valued. These values were transmitted from generation to generation (Debray 2000).

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