
Review Essay: Progress and Possibilities in Migration Studies: The Contributions of Werner Hacker to the Study of Early German Migration to Pennsylvania

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"Auswanderer aus dem Territorium der Reichstadt Ulm, vor allem im ausgehenden 17. und im 18. Jahrhundert." (*Ulm und Oberschwaben. Zeitschrift für Geschichte und Kunst*, vol. 42/43 (1978), pp. 161-257.)

Auswanderungen aus Baden und dem Breisgau, Obere und mittlere rechtseitige Oberrheinlande im 18. Jahrhundert archivalisch dokumentiert. (Stuttgart and Aalen: Konrad Theiss Verlag, 1980. Pp. 743.)

Kurpfälzische Auswanderer vom Unteren Neckar, Rechtrheinische Gebiete der Kurpfalz. (Stuttgart and Aalen: Konrad Theiss Verlag, 1983. Pp. 208.)

Auswanderungen aus Rheinpfalz und Saarland im 18. Jahrhundert. (Stuttgart: Konrad Theiss Verlag, 1987. Pp. 797.)

Werner Hacker, the indefatigable former director of the West German national railway system, has recently made yet another major contribution to the study of eighteenth-century German migration. Although there is no guarantee that this will be his last (in spite of his advanced years), it seems appropriate at this time to review his accomplishments relevant to the German migration to Pennsylvania and assess their potential and importance.

Recently many new publications have appeared containing consolidations of emigrant lists to America. Don Yoder edited a collection of lists from Zweibrücken, Schaffhausen, Württemberg and Wertheim that had been published separately by the *Pennsylvania German Folklore Society*. Later he published a consolidation of 24 articles appearing in *Pennsylvania Folklife* from 1966 to 1977. Also, Henry Z. Jones compiled lists of early German immigrants in New York, and Inge Auerbach, in the Hesse state archives, produced a list of emigrants from that German state in the eighteenth century.¹

Further, Annette K. Burgert has published an impressive two-volume work, in which she used previously published emigrant lists, along with church books

in the Palatinate and Pennsylvania, to create profiles of over one thousand emigrants, including their place of origin, date of emigration and place of settlement in Pennsylvania. Throughout the 1980s P. William Filby has edited a massive, multi-volume index of all American immigrants before 1900, which is updated annually, and Michael Tepper has published several consolidated lists of pre-1900 immigrants. Carl Boyer produced a three-volume collection of ship lists for the Atlantic colony-states.²

These new additions, along with older lists compiled by Rupp, Faust, Strassburger and Hinke, Knittle and others, are making it more feasible than ever to understand the German immigrant experience in early Pennsylvania, from place of origin to eventual settlement.

In the four works listed above, Hacker makes valuable contributions to this growing literature.³ These volumes contain lists of over three thousand heads of families who emigrated to America, primarily Pennsylvania, in the eighteenth century. They are the result of exhaustive, decades long research in the local and state archives of Ulm, Baden and the Palatinate—areas from which major emigrations to America took place. Essentially, Hacker has given historians a comprehensive consolidation of emigrations from these areas—that is *official* emigrations. The opportunities his lists provide for historians of Pennsylvania, America and Germany are enormous.

From the first area, the imperial city Ulm and its territories (today in eastern Württemberg), Hacker found 813 heads of family emigrating, 128 of whom (16 percent) went to America. The second area, Baden and the Breisgau, had some 12,000 emigrant heads of family, 686 (6 percent) of whose destination was America. This seemingly low figure is somewhat misleading. This area incorporated many political entities, including Baden-Durlach, which itself was physically separated by other states into three parts. The northern part, around Karlsruhe, had 2406 total emigrations of which 629 (26 percent) went to America. The lower Neckar area of the Palatinate (*Kurpfalz*) had 2231 emigrations, 544 to America (24 percent). And finally, the western Palatinate and Saarland had 16,834 emigrations, 1892 (11 percent) to America.⁴

Hacker has probably found almost all emigrants recorded in the governmental documents. Before leaving, potential emigrants in virtually all German states were required to report their intentions to the authorities and pay very large fees. Hacker's work is based primarily on painstaking, decades long scrutiny of these documents in various archives of southwest Germany. The value of his work is that it is essentially a comprehensive study of this valuable source over fairly large geographic areas and for a long period of time (the eighteenth century). Other published lists tend to cover smaller time periods using varieties of sources, but not comprehensively. Hacker makes no claim to have found all emigrants from these areas, however. Illegal, or unofficial emigration (the *Schwarzauwanderung*)

is as big a problem for twentieth-century historians as it was for eighteenth-century German authorities trying to prevent it, and whoever consults Hacker's work should keep this in mind. Annette Burgert (*Eighteenth Century Emigrants*) has found a way to deal with the *Schwarzauswanderung* by searching church books for names that disappear from their respective villages in the Palatinate and then appear in American immigration records. She found 624 emigrant heads of household in the northern Kraichgau (an area Hacker covered in *Kurpfälzische Auswanderer*), while Hacker lists only 544 in his entire volume. The difference is attributable to the *Schwarzauswanderung*. Hacker is dealing with a particular type of emigrant—the type that played by the rules. In this respect his work is unsurpassed, comprehensive and definitive.

The organization of all four volumes is roughly the same. Hacker begins by giving a general description of the geography of the areas and goes on to discuss political conditions and the administrative requirements for emigration. His detailed explanations of the various governmental offices involved, their duties and relative success in collecting manumission and emigration fees reveal a great deal about the state in eighteenth-century southwest Germany. Motivated by mercantilist views of controlling and manipulating their populations (the people are the wealth of a nation—the more a nation has, the stronger it will be, etc.),⁵ all the governments resisted emigration by charging enormous fees for manumission from serfdom, permission to emigrate, and export of possessions. They also harassed emigrants by forbidding them to return (threatening confiscation of their goods if they did) and passing edicts outlawing emigration. The contrast between the heavy tax burden in Germany and the light one in America cannot be overemphasized. Indeed, one wonders if an increasing contact with the state (and possibly a resentment thereof) might not have been in the background of many German immigrants in Pennsylvania and other colonies. On the other hand, no German state in the three-hundred year history of emigration to America was successful in halting emigration for very long.

Hacker also discusses the causes of emigration, and it is here that there are problems. As do many historians of eighteenth-century German emigration, Hacker tends to give laundry lists of causes, without explaining how they might have worked together in the particular situation of each territory. In Baden and the Breisgau, for example, increasing scarcity of land resources, almost continual warfare before 1748, crop damage resulting from cold weather, floods and storms, livestock diseases, as well as escaping the military draft and elopement are all mentioned as causes of the emigration (pp. 31-42). Yet nowhere does Hacker analyze these developments in conjunction with detectable emigration (from his lists) in order to discover what the dynamic behind emigration might have been. Unseasonably cold weather, storms and floods can mean disaster for any agrarian society, but why did they cause emigration only from certain areas?

Also, Hacker's insistence that "nearly continual" warfare was a major cause of emigration from southwest Germany is very misleading. After 1714 the worst burdens of war were shifted to other areas of Europe and it is well after 1714 that most emigration occurs. One should not view German immigrants in Pennsylvania as a people who had fled a land of death and destruction, searching for peace in the New World. While it is true that the flow of immigration into Philadelphia is higher between mid-eighteenth century wars (see p. 211), this is because the wars interrupted the growing immigrant shipping industry, not because people were escaping war.

Also, while Hacker emphasizes the catastrophic effects of weather conditions on the harvest in 1708/09 and 1770/71 (and many other years) contributing to high emigration in those years, he does not consider that these conditions were prevalent throughout Europe. Yet people emigrated only from southwest Germany. In fact, even in Baden there were significant variations: Virtually no one left middle or southern Baden in 1709, while significant numbers may have left the northern areas (though Hacker's lists do not even bear this out).

Hacker's later works correct this problem to some degree. In *Kurpfälzische Auswanderer* he lists "permanent" and "temporary" causes (pp. 47-57). Among permanent motives are religion (which played no role in Baden), overpopulation, the military draft, serfdom and the burden of war requisitions. Since the late seventeenth century Protestants and especially Anabaptists had been under pressure from the Catholic regime.⁶ Though he recognizes the importance of overpopulation and accompanying scarcity of land, Hacker only devotes three lines to this crucial aspect of emigration. Concerning the draft and war requisitions, he once again simply lists all the wars fought in central Europe during the eighteenth century and assumes their relationship to the emigration. Finally, while serfdom itself did not "cause" emigration it served as a constant reminder to potential emigrants of their status and a contrast to the possibilities elsewhere. About two thirds of the people in this area were serfs.

Short-range (temporary) causes of emigration from the lower Neckar region of the Palatinate included crop damage from severe weather, unofficial recruitment (e.g. letters from friends and relatives), as well as official recruitment (the activities of agents working for speculators and shipping interests) from the destination lands, personal debts and the lack of credit and problems with coinage. While his first two reasons are sound, if not well-supported, the last two are neither linked adequately to emigration, nor explained well in their own right.

In his last work, *Rheinpfalz und Saarland*, Hacker finally establishes a more complete relationship among causes of emigration (pp. 89-98). Overpopulation and land scarcity are the most important underlying, continuing problems behind emigration. The population level of 1618 (before the long period of destructive wars) is regained about 1740 and parcelling of land in areas practicing

partible inheritance became more and more acute thereafter as the population continued to grow. Wars, bad weather and religious persecution played their usual roles (though once again, Hacker does not effectively establish clear relationships between these factors). Recruitment (*Werbung*) from the destination lands served as the last factor which touched off emigration.

In addition to discussing politics, administration and the causes of emigration, Hacker also presents rough sketches of the course of emigration in each territory. Although it is not in any way based on a quantitative analysis of his lists, these sketches are useful in that they give the reader some sense of when larger numbers of people were leaving and how conditions varied, as well as to what their destinations were. Major emigrations to America from the territories of Ulm occurred from 1740 to 1753 and 1765 to 1768.⁷ He lists occupations of some of these emigrants in the years 1751 and 1752: 37 percent were weavers, 22 percent farmers, 6.5 percent tailors and 4 percent clockmakers (pp. 178-189). Most emigrants from southwest Germany in the eighteenth century actually went not to America but to eastern Europe (especially to Hungary, Transylvania, the Banat, Galicia, Russia and Prussia). Thus Pennsylvania Germans, numerous as they were in that colony, represented only a small minority of the total emigration, even in the Palatinate and northern Baden, where their numbers were highest. Hacker speculates that this was because transportation to east Europe was easier (*Baden und Breisgau*, p. 116). However, many Swiss went to America and for them the journey was longer than for those in northern Baden who went east. Also, in 1816 and 1817 there was a major emigration from around Freiburg (in southern Baden) to America under travel conditions prevalent in the eighteenth century.⁸

Hacker's discussion of the nuts and bolts of the emigration process is thorough and revealing. Almost all emigrants were from rural areas, being either farmers, artisans or laborers, and many if not most were serfs. (Serfdom was abolished in 1783 in Baden and 1803 in the Palatinate, though many of the old duties, especially regarding emigration, remained.) In order to emigrate serfs had first to apply for manumission and pay a large fee upon receiving it. Manumission was granted or denied by the grace of none other than the territorial ruler, often personally, though there was an extensive bureaucracy which handled most such affairs.

The fees for manumission varied, but all were high. The authorities in Ulm extracted 2 to 4 percent of the property of men and 16 percent from women, as well as another 8 fl from each person, including children. Baden-Durlach and the Palatinate each received 10 percent from both men and women and the Duchy of Zweibrücken (see *Rheinpfalz und Saarland*) 5 percent from men and 7 percent from women. Once manumitted potential emigrants still had to pay large fees for emigrating and removing goods from their territory. In general, these equalled

well over 10 percent of their remaining goods. Altogether families with two children were required to pay roughly the following amounts by territory⁹:

	Serfs	Free
Ulm	20% + 33fl	10% + 33fl
Palatinate	20%	10%
Zweibrücken	14% + 2fl	6% + 2fl
Baden-Durlach	22% + 33fl (ca.)	12% + 7fl (ca.)

These figures suggest that the emigrants were anything but poor: Emigration was an expensive proposition. Families essentially gambled their entire livelihood on succeeding in this enterprise. Many who had some wealth could spend all of it paying the above fees, the costs of making their way down the Rhine River and waiting in Rotterdam for a ship sailing to Philadelphia, followed by overseas passage and establishment in America. Indeed a small fortune could be spent just trying to reach Rotterdam. Thereafter many emigrants made their way across the ocean as indentured servants or redemptioners. One should not view those who were bound out for service in Pennsylvania as the poor of Germany. There were exceptions and ways to get around paying almost all costs of emigration (and the authorities often tried to promote them to get rid of their indigent population); even so, the best established patterns were expensive and most emigrants did not attempt the enterprise without at least some means of paying.

The text is actually only a small portion of each of Hacker's volumes. His major contributions comprise the published documents. With the exception of the first work on the territories of Ulm, the actual emigrants lists are preceded by large collections of photocopies of documents relative to the emigration. These include government documents permitting first manumission from serfdom and then emigration, fliers by recruiting agents describing their terms for providing passage to Philadelphia, government proclamations trying to restrict emigration, and letters. These documents are important in that they show the variety of experience behind Pennsylvania German immigrants. Gottlieb Mittelberger is often quoted as saying there were some thirty-six customs stops where dues were collected during his trip from Vaihingen-on-the-Enz in Württemberg to Rotterdam (thereafter to Philadelphia) in 1750.¹⁰ Yet a journey from Germersheim in the Palatinate to Rotterdam in 1752 required no payment of customs. Passage was 8 fl 30x for an adult and half that for children under nine years. (Infants were free.) Two adults were allowed to carry one large trunk and four adults slept in a space six feet by six feet.¹¹ With Hacker's documents historians can quickly get a picture of some of the details of emigration like these for large numbers of

emigrants from various territories, without having to rely on a few, well-known but not necessarily typical experiences like Mittelberger's.

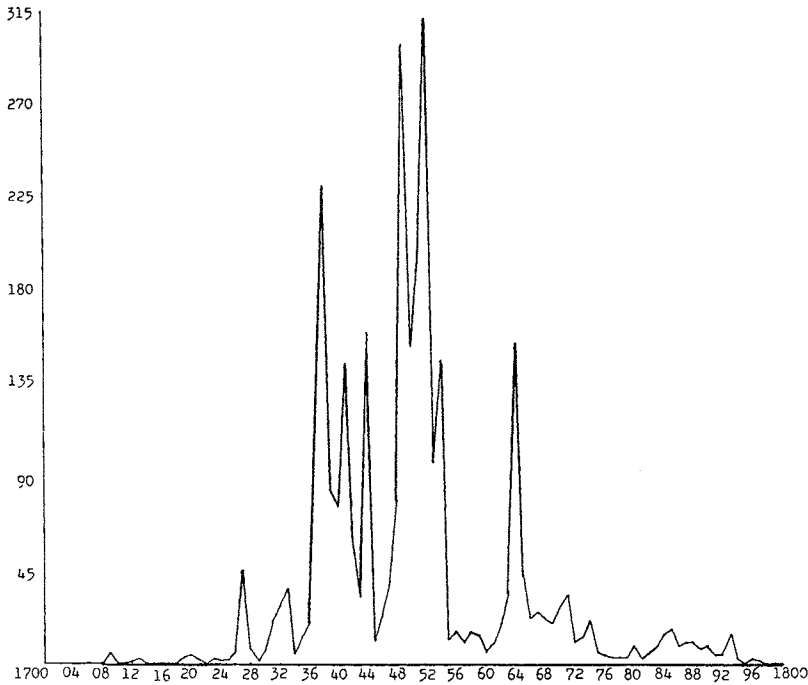
The actual lists, of course, make up the bulk of each volume. Names are listed alphabetically (an advantage for genealogists and a disadvantage in some ways for historians). Each entry is numbered for reference and the following data is included: age, occupation, place of residence (by parish), marital status, spouse's name, number of children (sometimes their names), value of property, manumission fee, emigration and other fees, call number indicating location in the archives, destination and day, month and year of the request to emigrate.¹² Unfortunately, not every entry contains all this information. However, almost all do contain place of residence, destination, the date of the request and some other information. Also, indexes of parishes exist for all volumes except *Rheinpfalz und Saarland* (a surprising and crucial omission) and for the Ulm territories there is an index of destinations. With these indexes one can readily calculate the number of emigrations by parish. *Kurpfälzische Auswanderer* and *Rheinpfalz und Saarland* also have historical maps showing the location of each parish, the absence of which for *Baden und Breisgau* presents a major handicap.

Two examples illustrate how Hacker's lists and the parish indexes can be used. Adam Ibringer, reference number 888 in *Kurpfälzische Auswanderer*, applied to the authorities to emigrate to America ("ins Neue Land") on May 3, 1752. He had six children and they lived in Schriesheim, today in the county of Heidelberg. (The historical map on the inside cover reveals that Schriesheim is just north of the city Heidelberg.) In addition to Adam Ibringer, 64 other families or individuals emigrated from Schriesheim. Since Adam only had to pay a 10 percent export tax, he probably was not a serf. Hacker found all this information in the State Archives of Baden (*Generallandesarchiv*) in Karlsruhe under the call number 61/6198: 441, 483, which any researcher could easily find in person, or receive in the form of a photocopy by mail.

Johann Schilling (Number 1756) came from Reichertshausen, then a part of the Sinsheim district and now in the county of Heidelberg as well. The map shows Reichertshausen lying east of the city of Heidelberg and north of Sinsheim. Seven individuals or families left Reichertshausen in the eighteenth century. Johann applied to go to America with his wife and children on May 7, 1751 and was charged an abnormally high amount of 15 percent for manumission (which means he was a serf) and 13 percent for exporting his goods. His call number in the *Generallandesarchiv* (GLA) is 61/6197: 428, 474; 135/96 Nr 266. Also, Hacker managed to find him on the Ship *Phoenix*, which arrived in Philadelphia on September 25, 1751, and a citation is given for Strassburger and Hinke's *Pennsylvania German Pioneers*.¹³

In addition to giving fascinating biographic information for individual emigrants, Hacker's data presents enormous possibilities for analysis of eighteenth-

century German immigrants in Pennsylvania and elsewhere.¹⁴ Emigration to America by year can be calculated and a combined graph from these four areas constructed:



Graph 1: Emigration Cases (Individuals and Families) from Hacker's Four Regions to America in the 18th Century

The graph shows that peak emigration occurred from the late 1730s to the early 1750s. After being interrupted by the French and Indian War, emigration resumed in the 1760s but at lower levels. With some exceptions, this graph corresponds roughly with a graph of Germans arriving in Philadelphia from 1727 to 1775.¹⁵ Immigration of all Germans into Pennsylvania increased significantly in the 1730s but the peaks reached in the late 1740s and early 1750s were much higher than those in Hacker's lists. Also, while 1752 was the largest year of emigration from the four regions discussed here, it was in 1749 that the most Germans arrived in Philadelphia. These differences are no doubt attributable to the *Schwarzauswanderung*, which must have increased at a greater rate than the official emigration during peak periods.

Emigration to America as opposed to other destinations can be compared between the four regions as well.

The following table makes it immediately clear that even in the areas from which many Pennsylvania Germans came, they were only a minority of the total. The western Palatinate and Saarland, from where so many "Palatines" came, had the lowest percentage of emigrants to America.

Table 1
Emigration to America as a Percentage of Total Emigration from Hacker's Four Regions in the 18th Century

Region	Emigrant Heads of Family	Emigrants to America	
		Numbers	Percent
Ulm	813	128	16%
Northern Baden-Durlach ¹⁶	2,406	629	26
Lower Neckar (Palatinate)	2,231	544	24
Western Palatinate and Saarland	16,834	1,892	11
Total	22,284	3,193	14%

The distribution of emigrants to America by decade and region can also be calculated:

Table 2
Distribution of Decennial Emigration to America by Region in the Eighteenth Century

Decade	Ulm		Baden/ Breisgau		Lower Neckar		Western Palatinate Saarland		Total	
1700-09							5	0%	5	0%
1710-19					3	1%	5	0	8	0
1720-29			1	0%	54	10	15	1	70	2
1730-39			161	23	87	16	326	17	574	18
1740-49	7	5%	152	22	102	19	671	36	932	29
1750-59	101	79	260	38	203	37	425	22	989	31
1760-69	12	9	59	9	56	10	244	13	371	11
1770-79	2	2	36	5	10	2	88	5	136	4
1780-89	4	3	12	2	12	2	78	4	106	3
1790-99			5	1	5	1	35	2	45	1
?	2	2			12	2			14	1
Total	128	100%	686	100%	544	100%	1892	100%	3250	100%

Here one can see how much eighteenth-century emigration was concentrated in the middle decades of the century. From 1730 to 1769 eighty-nine percent of all emigrants left these regions. Only in the lower Neckar, where ten percent of its distribution was in the 1720s was there significant emigration before 1730. Furthermore, all regions reached their peak period of emigration in the 1750s, with the exception of the western Palatinate and Saarland, where thirty-six percent left in the 1740s.¹⁷ The fact that emigration in the 1740s and 1750s was often held back by naval warfare indicates how truly massive it was in those years when emigrant-carrying ships could make the crossing. Again, this corresponds to the largest immigrations through Philadelphia in the 1740s and 1750s.

These three examples illustrate in only a small way the potential for analysis of Hacker's lists. With all the information for each emigrant in a database, historians could rigorously analyze the geography and local conditions of emigration, as well as class, age, marital patterns and many other important aspects of social history. Furthermore, these lists constitute biographies of many early Pennsylvania inhabitants. Especially when coupled with other published immigrant lists, historians could eventually establish the nature of community and kinship networks—to what degree they were reestablished in Pennsylvania, how long it took, and what if any upward mobility or changes in class structure might have been involved in the migration experience.

With Hacker's contributions and those of others mentioned earlier, we are approaching a better understanding of the entire process of emigration from German origins to final place of settlement in Pennsylvania and beyond. Furthermore, these sources are well-documented (especially Hacker's) and since they contain thousands and thousands of immigrants, we no longer have to rely on the often sketchy and possibly atypical experiences of, say Gottlieb Mittelberger or Henry Melchior Muhlenberg. Germans were the largest ethnic group in colonial Pennsylvania and an adequate social history of the group as a whole has yet to be written. Their European background and the experience of emigration are crucial to understanding their history in Pennsylvania. Knowing who came, when, from what town or village, age, occupation, marital status and wealth will be important in gaining a better understanding of their experience in the New World.

Hacker's work constitutes a giant step toward achieving these goals. As a textual, historical analysis of emigration from these four regions of southwest Germany, his work is lacking. But his ability to find vast quantities of important archival material, organize, document and publish it are unsurpassed and make a great contribution to understanding the background and history of the Pennsylvania German immigrant.

Notes

1. Don Yoder (ed.), *Pennsylvania German Immigrants, 1709-1786: Lists Consolidated from the Yearbooks of the Pennsylvania German Society* (Baltimore: Genealogical Publishing Company, 1980); Don Yoder (ed.), *Rhineland Immigrants: Lists of German Settlers in Colonial America* (Baltimore: Genealogical Publishing Company, 1985); Henry Z. Jones, *The Palatine Families in New York: A Study of the German Immigrants who Arrived in Colonial New York in 1710* (Universal City, California: Self publication, 1985); Inge Auerbach (ed.), *Auswanderung aus Hessen-Hanau im 18. Jahrhundert*. Vol. 1 in the series, *Veröffentlichungen der Archivschule Marburg—Institut für Archivwissenschaft*, n. 12. Marburg, 1987.
2. Annette K. Burgert, *Eighteenth Century Emigrants from German-Speaking Lands to North America*. Vol. I: *The Northern Kraichgau*. Vol. 16 in the series *Publications of the Pennsylvania*

German Society (Breinigsville, Pa., 1983). And Vol. II: *The Western Palatinate*. Vol. 19 in *Publications*. Birdsboro, Pa., 1985; P. William Filby and Mary K. Meyer (eds.), *Passenger and Immigration Lists Index* (Detroit: Gale Research Co., 1981-1988ff); Michael Tepper (ed.), *New World Immigrants. A Consolidation of Ship Passenger Lists and Associated Data from Periodical Literature*. 2 vols., *Immigrants to the Middle Colonies: A Consolidation of Ship Passenger Lists and Associated Data from the New York Genealogical and Biographical Record, and Emigrants to Pennsylvania, 1641-1819: A Consolidation of Ship Passenger Lists from the Pennsylvania Magazine of History and Biography* (Baltimore: Genealogical Publishing Company, 1979); Carl Boyer (ed.), *Ship Passenger Lists*, 3 vols., Newhall, CA: Boyer Publications, 1977-80. For an exhaustive bibliography of published pre-1900 immigrant lists see P. William Filby, *Passenger and Immigration Lists Bibliography, 1538-1900* (2nd ed.; Detroit: Gale Research Co., 1988).

3. Hacker has published numerous other works containing large numbers of eighteenth-century emigrants from southwest Germany. However, almost all of these emigrants went to east Europe. The four works discussed here are those which contain large numbers of emigrants to America (the large majority of whom went to Pennsylvania), though most even in these volumes went to east Europe as well, as will be shown later. A translated extract of another of Hacker's works (*Auswanderungen aus dem früheren Hochstift Speyer nach Südosteuropa und übersee im XVIII. Jahrhundert*, vol. 28 in *Schriften zur Wanderungsgeschichte der Pfälzer*, Kaiserslautern: Heimatstelle Pfalz, 1969) is available which lists those who emigrated to the British colonies, but there were only twenty-two such cases. (See Don Yoder, trans., "American Emigrants from the Territories of the Bishopric of Speyer," *Pennsylvania Folklife*, 21:3 (Summer 1972): 43-45.)

4. All of these compilations are my own. One of the problems with Hacker's work, as will be discussed later, is that he in no way attempts any quantitative analysis of his own lists, some-

thing typical of researchers with primarily genealogical concerns.

5. This was a problem English, Scottish and Irish emigrants to America in the eighteenth century had to deal with as well.

6. The validity of religious persecution as causing emigration from the Palatinate was questioned years ago by Otto F. Raum, who found that a third of the emigrants in the years after 1709 were Catholic, while they made up less than a third of the population. (See "Die Hintergründe der Pfälzer Auswanderung im Jahre 1709." *Deutsches Archiv für Landes- und Volksforschung*, 3 [1939], 551-567.)

7. My tabulations of his lists indicate that emigration to America from these regions was only significant from 1749 to 1752.

8. See Mac Walker, *Germany and the Emigration, 1816-1885* (Cambridge, Mass.: Harvard University Press, 1964), pp. 1-33. The Rhine River was not navigable beyond Karlsruhe (in northern Baden) by large boats and ships until after the Tulla correction, which was begun in 1817. See Eugen Rheinhard, "Die Veränderungen der Kulturlandschaft durch die Rheinkorrektion seit 1817," *Historischer Atlas von Baden-Württemberg*. Vol. 18/19, part 4 (1974).

9. It is difficult to estimate typical wages and assets for emigrants because they varied over time and from territory to territory. An average family holding some land and a dwelling may have had about 300 fl (roughly £120 sterling) after selling everything and before paying their fees and taxes, though often families emigrated without giving up their claims, returning later to handle their affairs or instructing friends and relatives who remained behind to do so.

10. Gottlieb Mittelberger, *Journey to Pennsylvania*, ed. and trans. by Oscar Handlin and John Clive (Cambridge, Mass.: Harvard University Press, 1960), p. 11.

11. *Rheinpfalz und Saarland*, pp. 178-179.

12. Hacker's lists are very accessible to those who cannot read German. The data for each entry consists primarily of numbers, names and abbreviations. At the beginning of each work are keys for all the abbreviations, most of

which can be readily understood. The others can be easily translated with a dictionary.

13. Ralph B. Strassburger and William J. Hinke (eds.), *Pennsylvania German Pioneers. A Publication of Arrivals in the Port of Philadelphia from 1727-1808* (3 vols. Norristown, Pa: Pennsylvania German Society, 1934).

14. Once again I must emphasize that Hacker did not attempt to analyze his lists. His introductory material is based on secondary literature and the more qualitative material he found while searching the archives. The value in his work is that he has made it possible for historians to analyze large numbers of emigrants by

consulting his books, rather than spending decades in southwest German archives to get the same material.

15. See Strassburger and Hinke, *Pennsylvania German Pioneers*, vol. 1, pp. 768-776.

16. Note that only this region of Hacker's entire volume, *Baden und Breisgau* is considered in this table. The 629 emigrations from the northern Baden-Durlach equal ninety-two percent of the total.

17. Actually, the largest waves of emigration began in the late 1740s for the four regions together, as Graph 1 shows.