

Balancing, networking and the causes of emigration: early German transatlantic migration in a local perspective, 1700–1754

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I. INTRODUCTION

Since the early 1980s, the eighteenth-century beginnings of German mass migration to North America have been the subject of intense research and writing.¹ In spite of the multifaceted results of this research on both sides of the ocean, the textbook explanation of early German Atlantic migration has demonstrated a striking persistence. To quote from one of the best English-language textbooks on German social history, ‘from about 1750 on, over-population fuelled...the beginnings of the exodus to North America’.² This interpretation is exactly where scholars such as Wolfgang von Hippel stood more than a decade ago, and it dovetails with the migration theories of German population sociology of the 1970s.³ But is it right? And what alternative explanations are available? The most important alternative to the received approach is offered by the concept of networks. As Charles Tilly put it, ‘categories stay put, networks move’.⁴ If emigrants moved along lines of contacts and information, we do not need to refer to strong push or pull factors in order to explain why they were ‘uprooted’ from the territorial categories to which they belonged. Chain migration can be interpreted as a self-generating and self-sustaining process, a system in itself. In this perspective, migration becomes more and more likely because of flows of information, credit or capital between the areas involved in migration – contacts created by migration cause additional migration.⁵

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Recent works on early German emigration have emphasized that migrants stayed with their kin or with people from the same region.⁶ However, little is known about what networks actually meant for the individuals who were embedded in them – were they supra-individual decision-making units, did they organize reciprocal assistance among migrants, or did they merely provide information? It seems obvious that migrants and non-migrants frequently interacted with other people. But not all social interactions are equally important in a decision to migrate. The study of networks in migration history so far seems to employ less explicit models than the overpopulation approach. Mostly, the issue of ‘networks’ serves as a metaphor rather than a theory.⁷

The network approach also entails unstated assumptions about local lives. First, information networks can trigger migration only if the information arrives locally. Were eighteenth-century peasants well informed about the Atlantic world, or were their governments right in thinking that greedy emigration agents spread false hopes? Second, who made the decisions? Can extended kinship groups be identified who decided to send out their members, or did only small groups of husbands and wives, siblings and children go together? Third, a certain notion of nostalgia is associated with the issue of networks. But, at least during the nineteenth century, social relations were far from harmonious in southwest Germany. Rural society was characterized by inequality and social control. Some emigrants must have just longed to be deprived of this kind of social embeddedness.

As it has been applied in most research on German emigration, the overpopulation concept seems to imply a vague sense of scarcity at home, crowds visibly gathering in small villages or at harbours and a traditional world view of ‘limited good’ (to quote George Foster).⁸ In a more specific sense, the Malthusian concept of overpopulation can be understood as a version of the Law of Diminishing Returns. The carrying capacity of a certain area is limited because, *ceteris paribus*, an increase in population of a given proportion yields a ‘food’ increase – or marginal product of labour – of a smaller proportion. Beyond the ‘carrying capacity’, population growth is halted – a ‘*plafond*’ is reached – because people will starve, because they will no longer marry and have children or because they will emigrate. Emigration, then, would not be caused directly by population growth but by low income. Even within such a more explicitly defined approach, the concept of overpopulation causing emigration is far from self-evident, as becomes clear from an examination of Figure 1.⁹

First, average productivity must be distinguished from marginal returns to labour, which determine wages, according to economic theory. If we assume that migrants make their decision to depart in order to maximize

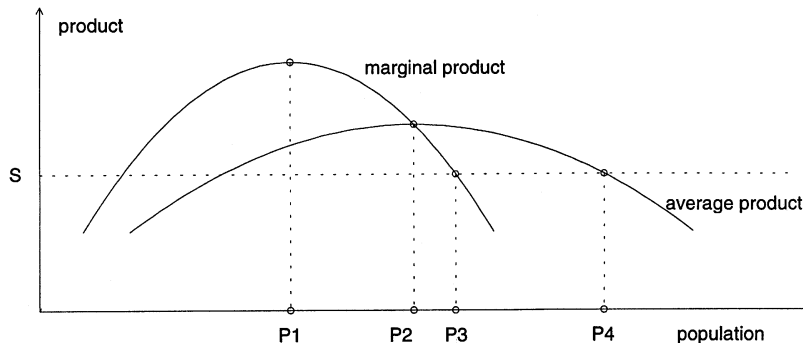


FIGURE 1. Labour productivity as a function of population levels. (For an explanation of the symbols, see the text.)

their returns, they will choose to go to a specific country where they expect the marginal returns to be higher. *Ceteris paribus*, they will prefer situation P1 over P2, although P2 is the optimum population level since average productivity is maximal at this point. Overpopulation as a motive for emigration is relevant only if we assume that people do not maximize utility but rather try to keep their income above subsistence – in other words, if we place migration in a subsistence context instead of an ‘investment context’ (according to Larry Sjaastad).¹⁰ Second, it remains a matter of definition at what point overpopulation – and then ‘balancing’ emigration – will set in. Are territories overpopulated when the marginal or rather when the average product falls below the subsistence line (P3–P4 on the subsistence line ‘S’ in Figure 1)? As far as income from wage labour is concerned, the marginal productivity of labour should be relevant. On the other hand, the income of self-employed peasants can better be discussed in terms of average per capita grain production. Third, an implicit assumption of every discussion of overpopulation is that income is generated from the resources of a limited territory. In an integrated world economy, regional productivities and thus incomes are much less dependent upon population levels than in the kind of territorialized state economy that served as a model for eighteenth-century bureaucratic thinking.¹¹ Insofar as the economic activities and general outlook of the population were not confined to the territorial categories to which they belonged, overpopulation of these territories is not a sufficient context for interpreting their decisions. Last not least, a *ceteris paribus* discussion of marginal productivity should not be mixed up with the description of an historical process. As Ester Boserup has argued, population growth decreases transaction and transportation costs, thereby increasing labour productivity if other factors remain equal. It is therefore

possible that during a specific historical phase of population growth, the theoretical slopes depicted in Figure 1 were shifted to the right, so that the carrying capacity was never exhausted.¹²

Historians' discussions of eighteenth-century German emigration to America are less concerned with Malthusian and Boserupian population theory than with the social advantages and drawbacks of gender and birth-order privileges in inheritance. The emigration areas were concentrated in the southwest of the German countries. Except for Prussia, itself a recruiting country, no Protestant German-speaking territory adjacent to the river Rhine is known that was not part of the Rotterdam–Philadelphia migration system. These areas were far less productive than the 'best poor man's country', Pennsylvania.¹³ Southwest Germany and Switzerland were also largely characterized by a relatively high population density, by strong peasant property rights (including the rights to buy, sell and bequeath land) and by an egalitarian inheritance practice. The core of the overpopulation thesis is that an unequal, impartible inheritance system could have prevented the population from growing, becoming impoverished and emigrating. In this view, unequal social, gender and age relations are interpreted as being functional for the common benefit of society – as a floodgate against the perceived danger of overpopulation and pauperism.¹⁴

Although this view – that emigration was encouraged by property subdivision through partible inheritance and other property-rights pattern – stems from a particular historiographical tradition, that¹⁵ does not prove that the causal connection between subdivision and transatlantic migration did not exist. However, evidence for a causal chain leading from equal inheritance to population growth, poverty and emigration seems to be weak, and the influence of other variables such as ecological settings, data shortcomings and the position of the nobility must not be neglected.¹⁶ Discussion of the causes of early German migration to America can to some extent proceed on an overarching macro level – age, gender and literacy patterns of migrants as well as the timing of their movements are best analyzed with the help of the Philadelphia passenger lists.¹⁷ This article will, however, focus on the local level. Göbrichen in the margravate of Baden-Durlach was situated right in the middle of the eighteenth-century emigration area. Göbrichen was then a grain-producing village in a partible inheritance area. There was no local gentry exploiting the unfree labour of the peasants, and the place underwent considerable population growth during the eighteenth century. Thus it had much in common with most areas of transatlantic emigration. The reasons for choosing this village for analysis are that there was considerable emigration to colonial North America,¹⁸ and that this place offers a unique combination of

quantifiable sources. A full family reconstitution has been published, and tax lists have been preserved.¹⁹ When linked to each other, these records allow for a more precise – if exploratory – observation of rural society than any analysis on a larger geographical scale might offer.

II. DOES OVERPOPULATION EXPLAIN EMIGRATION?

The land-subdivision and overpopulation theses imply a causal connection between being poor compared to other people in the land of origin and the decision to emigrate. It has frequently been asserted that poverty was the main cause of emigration. Moreover the argument, well known in migration history, that the very poorest usually could not finance their translocation, and that this explains their low percentage among migrants, does not hold in the case of early Rhineland emigration across the Atlantic. Even the poorest migrants could finance translocation costs to British North America by means of redemptioner contracts, similar to those under the indentured-service system of the British North Atlantic. If the basic dynamic of migration was one of ‘overpopulation’ causing poverty and poverty causing ‘propensity to emigrate’, in the case of German-language redemptioner migration to British North America it should be expected that the most marginalized classes would be those who decided to emigrate.²⁰

So far, it has never been demonstrated that migrants to America were poorer than average Swiss or Germans in the eighteenth century. Also, government sources tend to exaggerate emigrant poverty. This is because poverty was an important justification for manumission,²¹ because exported property was taxed and because travel could be financed by credit (so that there was no reason to export all property). Even if emigrants were poorer than non-migrants, this could be a consequence of their young age. An analysis of the precise workings of peasant land subdivision and population growth requires the comparison of migrant and non-migrant wealth. Such an analysis is possible at the local level only, and must focus on the entire household property.

In Table 1, some information on the migration behaviour in Göbrichen households is condensed. Correlation analysis seems to be an appropriate method since our purpose is purely explorative (that is, a comparable regression analysis would suffer from misspecification); it does not imply distinguishing the strength of the various influences. In 1736, Göbrichen had 52 households that can be used for correlation analysis. Test power on a 5 per cent level is 93 per cent for correlations that ‘explain’ at least 20 per cent of variance. The unit of observation is genealogical families, aggregated from multiple marriages of the husband if applicable, and

TABLE 1
Correlations of socio-economic variables with emigration: households in Göbrichen (1736)

<i>Correlation (Rho/Phi) (N)^a</i>	<i>Emigrated to America</i>	<i>Emigrated to all destinations</i>
(1) household acreage in 1736	−0.08 (52)	−0.17 (48)
(2) children surviving to age 6	0.09 (52)	0.17 (48)
(3) acreage per surviving child	−0.18 (41)	−0.22 (41)
(4) change of acreage since 1718	−0.34 (21)	− 0.50 (21*)
(5) artisans vs. non-artisans	−0.09 (52)	−0.08 (48)

^a Test statistics: Spearman's Rho, Wilcoxon's Z, Fisher's Exact Test; significance levels: ** 0.01, * 0.05, † 0.10.

linked to landownership information. Families were included if both husband and wife were alive in 1736, this being the last date for which we have landownership information before 1742, when emigration began. Whilst landownership is measured in 1736, all the other variables refer to the entire family cycle. Spearman rank correlations are given if at least one of the variables involved is continuous, Phi correlations if both are dichotomous.

Column 1 presents the correlation between various socio-economic characteristics on the one hand and on the other a dichotomous variable which takes a value of 1 if any family member (at least one child, husband or wife) emigrated to North America and 0 otherwise. Column 2 presents the correlation between the same socio-economic characteristics and a continuous variable: the percentage of children who survived to age 6 but were never buried in the village. We would expect that those variables that specifically influenced the decision to emigrate to North America would yield high correlations in the first column. Such variables that generally influenced emigration – to neighbouring villages or to other places in America, Germany, Russia or elsewhere – can be expected to yield high correlations in the second column.

In the five rows, we find correlations between economic variables and migration. Generally, the relative economic position of the families and the absolute number of their children did not have a detectable influence on migration behaviour. There is only a small group in which the absolute number of children seemed to matter: artisan and day-labourer households who also owned land. Among those 11 households – weavers, smiths, herdsmen, a cooper and so on – the number of children correlated strongly with emigration to all destinations, if not to America.²² The

correlation disappears, however, when we include landless artisan and day-labourer households. We might conclude that if better-off artisans had many children, these had difficulties finding a place in the village – in other words, a niche mechanism was at work but only for a small subgroup. With non-artisan peasants, the number of children did not play any role, but there was a slightly significant negative correlation between acreage per surviving child and emigration.²³ A third subgroup is formed by those landowners whose acreage can be measured in both 1718 and 1736. The children of these people tended to go if their parents became poorer, although this finding is not significant for emigration to America. Taken together, the selectivity of migration in Göbrichen does not support the concept of marginalized peasants pushed out of an overcrowded village. Being poor or having many siblings may in some specific cases have had some influence on general migration behaviour. The decision to go to North America, however, was not determined by these factors, if we can judge from the Göbrichen household data.

How crowded was this village in the first place? In Göbrichen, emigration to British North America began in 1742. If the overpopulation thesis is correct, we should expect that the carrying capacity of Göbrichen was exceeded at this date or earlier. But how can we measure ‘carrying capacity’? An approach to this problem that is preferred by most population biologists is to define carrying capacity as a function of the population development itself, namely as the maximum that is reached by a sigmoid growth process of the population, a phenomenon that has been described by the population historian Markus Mattmüller as the ‘*plafond*’.²⁴ The *plafond* can be understood as a ceiling which cannot be exceeded except for short periods. Can such a *plafond* be observed in Göbrichen, and had the population reached it when emigration set in?

Figure 2 shows the numbers of married couples who had children baptized in Göbrichen for each year between 1575 and 1750.²⁵ Counting couples from family reconstitution data is more feasible than determining exactly how many individuals lived in the parish. An individual may easily migrate to or from a place without being recorded in the church registers. Married couples, however, leave many traces, although sometimes we have only the date before which a couple was married or after which a person died. Contemporary lists of citizens (*Bürger*) and denizens (*Hintersassen*) in Göbrichen correspond closely to our estimates given in Figure 2.²⁶

The figure does not show us any *plafond*. Göbrichen was growing rapidly until the plague years of 1629 and 1635. Obviously, this double mortality crisis was a consequence of fighting in the Thirty Years’ War. It must be interpreted in terms of the European state-building process, and

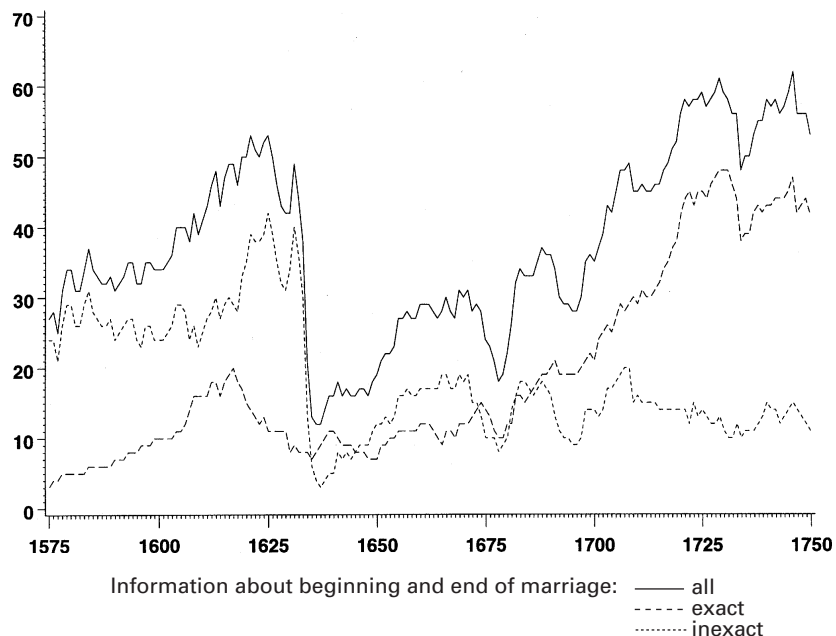


FIGURE 2. Numbers of couples included in the family reconstitution dataset, excluding couples who had no children baptized in Göbrichen, 1575–1750. (For the method of calculation used, see the text and note 25.)

not as a positive check within a balancing demographic and economic system. After 1635, the growth process set in again, with all downswings associated with military activity.²⁷ The underproduction crises of 1709–1714 and 1740–1741 did not result in any local mortality peaks. We might speculate that a *plafond* set in at the end of the depicted period. But another proxy for overall population – numbers of married non-migrant children of the couples whose data were used for Figure 2 – continued to increase at least until 1770. In terms of a *plafond*, Göbrichen was not overpopulated during the eighteenth century.

Another technique would point to the amount of ‘food’ – to use Malthus’s term – that was available in the given area. In agrarian societies, ‘food’ literally translates as grain. Testing the overpopulation thesis would then involve comparing the amount of grain available to be consumed in an area of emigration with the nutritional needs of the population.²⁸ A weaker form of the same argument might point to a insufficient amount of ‘food’ not for the population in general but for the poorer group.²⁹

In terms of grain, 250 kilograms per person would certainly not underestimate the annual consumption of an average inhabitant, including

TABLE 2
Agrarian carrying capacity in Göbrichen, eighteenth century

Gross productivity:		690 kg/ha
Seed:		25 % of harvest
Tithes:		10 % of harvest
Taxes:		10 % of harvest
Remainder:		380 kg/ha
Bran:		12 % of remainder
Other losses:		6 % of remainder
Net product:		310 kg/ha
Nutritional needs:		250 kg/person
'Self-sufficient' family holding (5.5 persons):		4.4 ha
	<i>1701</i>	<i>1742</i>
Acreage:	210 ha	475 ha
Net product:	65,100 kg	147,250 kg
Population:	182 persons	237 persons
Nutritional needs:	45,500 kg	59,250 kg
Theoretical carrying capacity:	250 persons	590 persons
Carrying capacity exhausted:	70 %	40 %

children.³⁰ Hectare yields tended to increase in the long run. One specific type of tithe returned 60 kg/ha during the early fifteenth century, not quite 100 kg/ha in the late eighteenth century, almost 130 kg/ha in the 1820s and roughly 200 kg/ha during the mid nineteenth century. Clearly, the Boserup thesis is corroborated in Göbrichen over a long time horizon. But for the eighteenth century proper, agricultural data are too dispersed to establish a trend in hectare productivity. An average yield calculated from several kinds of tithes and from local demesne sources implies 1,380 kg/ha in the winter field.³¹ Including the summer field, which added about 50 per cent to the winter-field crops, we arrive at an average of some 690 kilogrammes per hectare of land on all three fields of the crop-rotation system.³²

The costs of agriculture, however, must be subtracted from this figure (see Table 2). It is certainly not too optimistic to assume that 25 per cent of the gross yield had to be re-invested as seed.³³ Tithes should account for 10 per cent of the harvest, and we may assume the same for state and manorial taxes.³⁴ Of the remaining 55 per cent, or 380 kg/ha, we must detract at least 12 per cent of bran and we might allow for some 6 per cent for other losses, before we arrive at an estimate of the net consumable product.³⁵ Thus 310 kg per hectare owned or 45 per cent of the gross harvest may be a conservative estimate of what the inhabitants of Göbrichen could finally consume.

Thus, a peasant farm family of 5.5 persons would have needed 4.4 hectares of land in Göbrichen in order to be self-sufficient. Of course, Göbrichen was no self-sufficient and isolated peasant village. It was embedded in relations of state support, credit and labour markets. In our figure of 30 kg/ha, this is ignored, as are the considerable possibilities for additional economic growth coming from protoindustry, especially in the second half of the eighteenth century, and because the climate improved as the century went on. The most important form of economic growth, however, was certainly a consequence of the increase in land utilization. In 1701, 210 hectares were cultivated in Göbrichen. In 1718, the growing population was farming on 475 hectares of land, and the area expanded further until, in 1791, 542 hectares were ploughed. Given a pessimistic estimate of productivity (310 kg/ha), and a relatively high estimate of consumption (250 kg/person), the carrying capacity of Göbrichen may be estimated as 260 persons in 1701, and at least 589 persons since 1718. In fact, there were only 182 persons or 70 per cent of the theoretical carrying capacity in the village at the beginning of the eighteenth century.³⁶ Until emigration set in, the population grew considerably – in 1743, about 237 persons were living in Göbrichen.³⁷ However, the economy of the village had been growing faster. After 1718, its carrying capacity was about 589 persons according to our estimates, and the population that was living in Göbrichen when emigration began took up only 40 per cent of the resources. If defined in terms of agricultural production and nutritional needs, the overpopulation concept does not tell us, therefore, why so many people emigrated from this village.

III. POPULATION GROWTH AND LOCAL SOCIAL RELATIONS

The land-subdivision thesis about emigration entails a certain model of the way local kinship networks and individual life courses ought to be related to each other in a patriarchal non-dividing peasant society. Under impartible inheritance, the family would be more important than the individual, and the unequal distribution of opportunities in life among those who did inherit and those who did not would serve the higher interest of local society. But what about social relations in a society where land *was* divided? Somehow, the Göbrichers managed to experience both some population growth and some economic growth, to practice partible inheritance and still to avoid overpopulation. In what way were family resources and individual lives balanced against each other in this village?

Social control of reproductive behaviour was weak. The number of economic niches – of houses and of *Hufen* (peasant possessions), to name two hallmarks of German theorizing about population structure and control – were changing continuously. Forming a new household was not

linked to obtaining a full peasant holding together with the social license for reproduction, as theory has it.³⁸ Instead, property was accumulated over a long life course during marriage. Even the law interpreted a marriage as a kind of firm whose *Rungenschaft* or surplus should be divided amongst the heirs.³⁹ Being a peasant did not mean keeping the inherited farm together; it meant starting with little and ending with a profit.⁴⁰

One possible alternative might be birth control on the individual – or more precisely, married couple – level. To some degree, this seems to have been the case. Analysis of age-specific fertility rates (ASF) shows that there was some limitation of family size in the seventeenth century and among those women who married early, as can be inferred from the concave or straight course of the ASF. For the other groups and for early-eighteenth-century marriages, the curve runs in a convex line.⁴¹ We may infer that birth control was more widespread during the difficulties and crises of the seventeenth century than during the upswing of the early eighteenth century, and that those women who married earlier also reached their number of desired children at an earlier phase of their lives. Both results suggest a certain ability to adapt reproduction in the face of changing circumstances.

While the above indicator of birth control refers to the behaviour of the entire population, an indicator suggested by Ulrich Pfister helps us to identify the specific couples who practised birth control.⁴² Birth control is assumed if the last birth occurred previous to the woman's 35th birthday or if there was a very long period between the second-last and the last birth. If other explanations, such as the death of the husband, are possible, the couple was excluded from the analysis. The first couples with a positive Pfister indicator were two midwives with their respective husbands, who had married in 1673 and 1677. As all but four earlier marriages had to be excluded from the analysis, we do not know if these two women were innovators. Still, their cases suggest that the women of Göbrichen were not passive victims of an instinct-driven reproductive process, leading to unavoidable overpopulation.⁴³

Another way of looking at the process of population growth in Göbrichen is provided in Table 3. Not only was the overall population growing during the eighteenth century, but the numbers of lower-class inhabitants increased even more dramatically. The pattern of increasing inequality and proletarianization – specifically, most of the increase is due to a rising number of weavers – usually associated with the concept of overpopulation seems in fact to be present in eighteenth-century Göbrichen. What did this increase in social inequality mean for the way individual lives were organized?

TABLE 3
Sizes of landholdings in Göbrichen, 1701–1776

	1701		1718		1727		1736		1776 (all)
	Married	Unmarried	Married	Unmarried	Married	Unmarried	Married	Unmarried	
0 ha (married couples only)	6		7		10		11		not given
above 0–1 ha	2	0	3	1	8	2	7	6	25
above 1–2 ha	3	1	4	1	2	3	2	4	13
above 2–5 ha	8	5	5	2	9	1	8	2	22
above 5–10 ha	12	3	8	2	12	4	13	5	23
above 10–20 ha	4	1	18	1	13	0	9	2	19
above 20 ha	1	0	5	2	2	2	2	0	4
Total	36	10	50	9	56	12	52	19	106

Note: Data for 1776 are from Heinrich Tölke, *Göbrichen, Neulingen: Monographie eines Dorfes und einer Landschaft im Norden Pforzheims* (Bad Liebenzell, 1995) Vol. 1, 117; Tölke estimates one *Morgen* to be 0.40 ha. A ratio of 0.32 would have been correct. This results in too-high numbers in the upper holding size categories for 1776.

TABLE 4
*Correlations of economic resources and life courses in Göbrichen,
households (1701–1736)*

<i>Rho (N)^a</i>	<i>Acreage</i>			
	<i>1701</i>	<i>1718</i>	<i>1727</i>	<i>1736</i>
1 Age at first marriage (husband)	0.14 (29)	−0.11 (43)	−0.12 (48)	0.04 (43)
2 Age at first marriage (first wife)	0.09 (30)	0.16 (44)	−0.13 (49)	−0.25 (43)
3 Fertile years, all marriages to age 40	−0.12 (29)	0.08 (43)	0.21 (49)	0.31 (43*)
4 Birth control index	−0.15 (14)	−0.23 (23)	−0.10 (31)	0.15 (27)
5 Intergenic interval	−0.08 (32)	0.15 (49)	0.16 (55)	0.03 (49)
6 Number of births	−0.01 (35)	0.23 (50)	0.20 (56)	0.32 (52*)
7 Proportion of children with unknown fate	0.12 (34)	−0.01 (50)	−0.02 (56)	−0.41 (52**)
8 Infant mortality up to age 6	0.06 (34)	−0.06 (50)	−0.19 (56)	−0.22 (52)
9 Number of children surviving age 6	−0.15 (35)	0.29 (50*)	0.35 (56**)	0.53 (52**)
10 Proportion of children marrying in Göbrichen	0.18 (34)	0.06 (48)	0.34 (55*)	0.44 (48**)
11 Marriage age of children	−0.24 (29)	−0.23 (39)	−0.37 (42*)	−0.28 (32)
12 Number of married children	0.00 (35)	0.24 (50†)	0.42 (56**)	0.63 (52**)
13 Age at death of children surviving to age 6	0.21 (34)	−0.12 (47)	0.21 (55)	0.43 (48**)
14 Proportion of outmigrants among children	−0.11 (34)	0.12 (47)	−0.10 (55)	−0.17 (48)

^a Test statistics: Spearman's Rho (row 4: Wilcoxon's Z); significance levels: **0.01, *0.05, †0.10.

Surprisingly, inequality had little impact, if any, at the beginning of the eighteenth century. However, the quality of life of the inhabitants later began to depend more on the wealth of their family. In Table 4, information on economic inequality in Göbrichen is linked to information about life courses. For the 1701 landowner cohort, economic position did not determine when they would marry, how many children they would have, or how long their children would live. There was no correlation between the extent of the couple's landholding, the number of children the

couple would have had, and the number of these who would later marry (that is, row 12 in Table 4, $Rho = 0.00$) in the 1701 cohort. But for the children of the 1736 landowner cohort, who lived, on average, until about 1770, and some of whom emigrated to America, this correlation had increased far beyond irrelevance ($Rho = 0.63$). For the members of this cohort relative poverty increased the rate of mortality (row 13, $Rho = 0.43$). Emigrants to America left before their life courses would be affected by this process. But had they chosen to stay, this is what they might have lived through.

The reproductive success of the upper strata was higher in 1736 than was the case for earlier cohorts, whilst the poor had fewer opportunities than before. In 1701 72 married persons had 92 married children in the next generation, that is a growth of 28 per cent. In the 1736 cohort, this rate was 35 per cent (104 parents and 140 married children). But a different picture emerges if a comparison is made between the reproductive rates of those families who owned holdings greater than the 'self-sufficiency' level of 4.4 hectares, and the reproductive rates of those who owned smaller holdings. The reproductive rate of the 1701 cohort was 22 per cent for the poor and 33 per cent for the better-off – in other words, the difference was relatively insignificant. However, the situation was vastly different for the 1736 cohort, with a growth rate of 6 per cent for those who had little or no land and 53 per cent for the upper strata. This was no process of demographic balancing and self-regulation. Indeed, it made the population grow at a faster, not at a slower pace.

An alternative explanation would focus, again, on the dynamics of kinship networks. David Sabean has studied the southwest German village of Neckarhausen, some 50 km from Göbrichen. He has suggested that in the eighteenth century a 'vertical' form of marriage relations between the richer and poorer classes was supplanted by a 'horizontal' model of increasing endogamy.⁴⁴ According to this model, beyond the mere growth of the lower classes, richer and poorer groups would become more closed, kinship would become more important and belonging to a rich or poor family would indeed become more decisive over the course of the eighteenth century. Looking back from the nineteenth century. Sabean's proposal seems to be quite plausible for Göbrichen where a wealthy kin group grew during the second half of the eighteenth century. Descendants of one couple, Lorenz Jung and Barbara Hofsäss, occupied most political positions and were powerful enough, in 1807, to appropriate a forest that had once been one of the most valuable parts of the village commons.⁴⁵ Similar conflicts of kinship/class groups were widespread in southwest German local communities in the late eighteenth and early nineteenth centuries.⁴⁶

The Göbrichen data for the first half of the eighteenth century fit Sabeau's model quite well, although it seems that only the beginnings of the pattern observed by him can be detected. Wealth indeed not only became more and more important for the life courses of individuals, it also became more and more dependent on kinship. In 1718, both the 1701 holding size of the husband's parents and the property of the wife's parents in 1701 varied only moderately with the wealth of the individual couples (Rho between 0.32 and 0.34†, tests not tabulated). But in 1736 there was a quite remarkable correlation with what the wife's parents had owned in 1718 (Rho = 0.62**). Contrary to what we would expect from a marginalizing process of subdivision, households owned more land the more relatives they had in the village, at least from 1718 (Rho = 0.26 in 1701, Rho = 0.42** from 1718). The kinship network also became more dense: while in 1701 the relatives of an average household constituted only 10 per cent of its neighbours (in the sense of being first-degree cousins or closer), in 1736 they accounted for 15 per cent. To be sure, until 1736 most interactions and social relations were not or not yet concentrated within the same wealth group. For instance, household wealth only weakly correlated with the household wealth of kin for most kinship categories.⁴⁷ Also, people bought and sold land and called on each other as godparents across economic-wealth categories.⁴⁸ But to a high and increasing degree, brides and grooms came from the same strata. While, until 1735, the amount of land the 15 brides could expect to inherit was correlated only moderately with the portions of their grooms (Rho = 0.28), after 1735 this correlation increased to Rho = 0.72 for the 14 couples concerned. In the long run, this increasing practice of economic endogamy implied that the wealthier peasants were less and less affected by poor people and their problems within their own kinship networks. We do not have to infer that this development made the children of the poorer household die younger – let alone emigrate – but these were the conditions some individuals and families, consciously or not, left to exchange for life in America.

IV. NETWORKS, INFORMATION AND THE DECISION TO EMIGRATE

So why did they leave? It would be simplistic to assume that emigrants were the victims of the growing network of nepotism they left behind. They were, after all, not poorer than those who stayed (and, as we shall see, they were equally embedded in the local kinship networks). One might argue that for those who were linked to the local oligarchy only by neighbourhood or loose kinship relations, opportunities were decreasing, while for the insiders prospects became better and better. However, it can hardly have been self-evident for young people in the cohort of around

1740 that their grandchildren's chances of being part of the local oligarchy around 1810 would depend upon their being the descendants of Lorenz Jung and Barbara Hofsäss who had died in the late seventeenth century. A more plausible interpretation might be offered by the concept of insecurity.⁴⁹ An important reason for staying where opportunities are more limited than elsewhere – for instance, staying in Baden-Durlach even if the productivity of labour was much higher in Colonial America – is that you know about the situation at home, and you do not really know what might be waiting for you in the other place. In Göbrichen, people could not be sure what would be waiting for them at home either. The local system of kinship underwent major transformations during the eighteenth century, even if no one could foresee that around 1770 even the timing of an individual's death would be influenced by his or her belonging to the right family or not. Insecurity would therefore not only affect potential migrants' estimates of what they might gain once they had reached their destination, but also their estimates of the opportunity costs of migration or the losses they might incur by not staying. There was no stable, unchanging world of kinship and security at home. On the other hand, migrants do not necessarily have to feel insecure about their country of destination if they are well informed. Changing networks can thus make local lives more insecure, but they can also, by providing information across territorial borders, foster the dynamics of migration systems.

As Robert Ostergren has demonstrated, nineteenth-century chain migration could imply the movement of people from specific extended kin groups, while other kinship cells did not send members across the Atlantic ocean.⁵⁰ If a similar dynamic was at work in Göbrichen, it would make little sense to compare the migratory behaviour of individual households – we should instead look at larger kinship groups. Indeed, several emigrants from Göbrichen were related to each other. The 1749 emigrant Elisabeth Bertsch, for instance, was a grand-niece of Mattheus Eichhorn, who had emigrated in 1742 and was a large landowner and miller in Broad Bay, Massachusetts. In 1752, Eichhorn's sister Eva emigrated together with her husband Hans Georg Wüst. It is not clear where they arrived, but in the same year Mattheus Hoffsess, a son-in-law from Hans Georg's first marriage, settled close to Eichhorn. And so on – but if quite a lot of emigrants were related to each other, does this not merely reflect the fact that many villagers were related to one another? Emigration from Göbrichen was characterized by a pattern of dispersal between Philadelphia, the Pennsylvania countryside and Massachusetts. Other Göbrichers ended up in places such as the Saratow area in Russia, Denmark or many communities across southwest Germany. Perhaps

TABLE 5
*Correlations of network variables with emigration, households in
 Göbrichen (1736)*

<i>Correlation (Rho/Phi) (N)^a</i>	<i>Emigrated to America</i>	<i>Emigrated to all destinations</i>
(1) officeholder	–0.05 (52)	–0.16 (48)
(2) godparenthood index	–0.06 (50)	–0.07 (47)
(3) kinship index	–0.01 (52)	–0.13 (48)
(4) husband born outside Göbrichen	0.36 (52*)	0.39 (48**)
(5) wife born outside Göbrichen	–0.09 (52)	–0.13 (48)

^a Test statistics: Spearman's Rho, Wilcoxon's Z, Fisher's Exact Test; significance levels: ** 0.01, * 0.05, † 0.10.

untypically, these people did not tend to cluster at their destinations.⁵¹ It is therefore also not so surprising that being kin to each other was extremely weakly correlated with making similar decisions about migrating to America.⁵² It seems, therefore, that the nuclear-family household is a meaningful level of analysis in this village where family households were, after all, nuclear and not extended.⁵³

Table 5 provides a similar type of analysis to that of Table 1. Now, however, we are looking at the relative position of migrant and non-migrant households in the local networks, not at their economic situation. Officeholding, godparenthood and kinship indicators measure how fully the household was integrated into Göbrichen society.⁵⁴ The interpretation of transatlantic or other migration as an outsider phenomenon is not supported. The option to emigrate was open and practical for everyone. The one Göbrichen variable that seems to have had at least a moderate influence on emigration to America was that the husband was not a native of Göbrichen. It seems that migration to North America and elsewhere was dominated by male decision-making.⁵⁵

The land market and the labour market were the two most important contexts migrants experienced. Especially if men married into another community, they had to acquire citizen or at least denizen (*Hintersassen*) rights in order to possess land. This was a process parallel with what immigrants into Colonial America had to achieve. The existence of a land market was a distinctive structural feature of the southwest German and Swiss areas of emigration. In Göbrichen, about 1,000 parcels of land were transferred during the decade from 1727 to 1736. Although most transfers seemed to ensue from inheritance, in more than a quarter of the transfers the participants were not closely related to each other. Moreover, there

was a labour market, not only for artisans but also for servants, who frequently entered and left the village. As Bernard Bailyn has suggested, emigration to North America should be interpreted as an extension of such domestic mobility patterns.⁵⁶

Only bits and pieces of the information that flowed from North America into Göbrichen can be reconstructed, but there is enough evidence to claim that the villagers were at least better informed than their enlightened government.⁵⁷ Informal, petty information flows were decisive for establishing reliable information about America, and it was precisely this type of knowledge which escaped the notice of government officials. Among the political elites in the German territories, there were far more myths and misunderstandings about America than among those who left – including the persistent myth that the very letters that distributed information about America were forged by Rotterdam Jews.⁵⁸

In the case of Göbrichen, Jacob Bertsch may have been a channel of information, although a late-comer to Göbrichen and an outsider to the local networks.⁵⁹ He had come to the village from nearby Königsbach in 1745, and married Elisabeth Knoll, the local smith's daughter. Neither of them was ever called on to be a godparent, and after Jacob's mother died he was, as a propertyless shoemaker, manumitted to America in 1749. Together with his wife, he managed to set up himself as an innkeeper in Philadelphia within five years. Letters to and from Germany, including the vicinity of Göbrichen, were left and collected at Bertsch's house, and 'newlanders', that is, transatlantic small traders and letter-carriers who organized travel for emigrants, stayed at his inn. Jacob Barge, as he now came to call himself, became a successful businessman and ethnic leader in the city of Philadelphia. As a good 'German subject of His Royal Majesty of Great Britain in Pennsylvania', he served in the German Society of Pennsylvania, but later helped in the organizing and financing of the American Revolution.

It seems that the character of Göbrichen's American network – which included other emigrants such as Mattheus Eichhorn at Broad Bay – was quite different from the network at home. Apart from the Hoffsess and Eichhorn families who happened to live in the same township on the coast of Maine, we have not the slightest hint that kinship or neighbourhood alliances from Göbrichen formed a supportive network in America, married among each other or managed to make life easier for those who were part of the group. Networks, it transpires from the Göbrichen local case, can perform very different functions. Jacob Barge was not that important to the petty emigration stream from Göbrichen in the sense that he helped his own or his wife's relatives to come over. But he was quite a notable contributor to the larger, supra-local and looser networks of

information that connected the hinterlands of Philadelphia with those of Rotterdam.

V. CONCLUSION

In this article, the causes of emigration have been investigated in a local context. Although exploratory, the micro-historical approach has the advantage of illuminating the perspectives and situations of those whose decisions we try to understand and whose behaviour we want to explain. Does overpopulation explain emigration in our case? The short answer is no. This is because overpopulation was not present in any '*plafond*' or nutritional sense – in fact, an increase in acreage combined with a long-term trend in productivity per hectare clearly outran population growth, and birth control seems to have been an option to the women and men of this village. Alternative explanations of emigration from Göbrichen are available. First, it seems that these people left their home territory for a region of higher opportunities even though their minimum subsistence was not at risk and regardless of population level. This may not be what we would have expected from sturdy, home-loving and subsistence-oriented peasants, but it is not too surprising either if we allow that even pre-industrial peasants wanted to maximize the returns of their labour and of the risks they took. Second, even if there were considerable risks and insecurities resulting from the decision to emigrate, some risks were also evident at home, especially as the character of the social fabric changed and opportunities for individuals became more dependent upon the kinship system. Third, the migration system of which Göbrichen formed a small part was linked to a flow of information across the Atlantic Ocean, which was itself a consequence as well as a cause of emigration. Emigration was connected with transactions in the land and labour markets, which were well established in pre-industrial southwest Germany, and the transatlantic movement can be interpreted as an extension and modification of these existing markets. In this sense, information about opportunities on these transatlantic markets was no alien factor that pulled people out of their traditional contexts. They were not pushed or pulled; they decided to go.

As an exploration of what networks might mean for migrants, this study on Göbrichen has offered the opportunity to observe more than just the interactions among emigrants, such as travelling together. This was possible because information about life courses and kinship was linked with records of economic standing. Different functions of networks can be discussed. Some of my findings run counter to the assumptions about social relations that are implicit in the traditional critique of the association between partible inheritance and overpopulation – for in-

stance that, in traditional society, family resources always determined the life courses of individuals, that the female potential for procreation must be controlled at a society-wide level and that unequal opportunities in life served the interests of society as a whole. In Göbrichen, family resources were not always that important; couples and especially women could control reproduction on an individual level; and when the local kinship system became socially more restricted and decisive in village life, this divisive process of kinship class-building clearly had no balancing effects and thus cannot be said to have served the interests of the entire local network. Moreover, in this region of nuclear households, no extended kinship networks could be identified that served as an encompassing decision-making unit for emigrants. Instead, decisions seem to have been made at the level of nuclear households and close kin: husbands, wives and siblings decided to move together. The closely knit groups at home rather seem to have increased insecurity, thereby making departure easier – but the loose transatlantic information network created by recent emigrants reduced insecurity and thus helped those who took the risks of the voyage to find a niche in a new environment. Since networks could have both positive and negative impacts on migrants, their ambivalent role deserves more research both on a local and on a transatlantic level.

ACKNOWLEDGEMENTS

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ENDNOTES

- 1 Marianne Wokeck, 'Harnessing the lure of the "Best Poor Man's Country": the dynamics of German-speaking immigration to British North America, 1683–1783', in Ida Altman and James Horn eds., *'To make America': European emigration in the early modern period* (Berkeley, 1992), 204–43; Farley Grubb, 'Redemptioner immigration to Pennsylvania: evidence on contract choice and profitability', *Journal of Economic History* 44 (1986), 407–18, and 'Colonial immigrant literacy: an economic analysis of Pennsylvania-German evidence, 1727–1775', *Explorations in Economic History* 24 (1987), 63–76; A. G. Roeber, *Palatines, liberty, and property: German Lutherans in colonial British America* (Baltimore, 1993); Mark Häberlein, 'German migrants in colonial Pennsylvania: resources, opportunities, and experience', *William and Mary Quarterly*, 3rd ser. 50 (1993), 555–74; Aaron Fogleman, *Hopeful journeys: German immigration, settlement, and political culture in Colonial America, 1717–1775*

- (Philadelphia, 1996); Wolfgang von Hippel, *Auswanderung aus Südwestdeutschland* (Stuttgart, 1984). For a notable exception to the overpopulation approach see Hermann Wellenreuther, 'Forschungen zur Geschichte der Arbeiter in Deutschland, England und Nordamerika im 18. Jahrhundert: der Arbeitsmarkt', in Klaus Tenfelde ed., *Arbeiter und Arbeiterbewegung im Vergleich: Berichte zur internationalen historischen Forschung* (Munich, 1986), 63–99.
- 2 Ernst Schubert, 'Daily life, consumption, and material culture', in Sheilagh Ogilvie ed., *Germany: a new social and economic history*, Vol. II. 1630–1800 (London, 1996), 350–76 (at p. 350).
 - 3 Wolfgang Köllmann, 'Versuch des Entwurfs einer historisch-soziologischen Wanderungstheorie', in Ulrich Engelhardt et al., *Soziale Bewegung und politische Verfassung* (Stuttgart, 1976), 260–9.
 - 4 Charles Tilly, 'Transplanted networks', in Virginia Yans-McLaughlin ed., *Immigration reconsidered: history, sociology, and politics* (New York, 1990), 79–95.
 - 5 Walter Kamphoefner, *The Westfalians: from Germany to Missouri* (Princeton, 1987); Jan Lucassen, *Migrant labour in Europe 1600–1900: the drift to the North Sea* (London, 1987); Charles Tilly, 'Migration in modern European history', in William McNeill and Ruth Adams eds., *Human migration: patterns and policies* (Bloomington, 1978), 48–74.
 - 6 Häberlein, 'German migrants'; Fogelman, *Hopeful journeys*.
 - 7 See the valuable discussion by Andrejs Plakans in *Kinship in the past: an anthropology of European family life, 1500–1900* (Oxford, 1984), 217–40.
 - 8 George M. Foster, 'Peasant society and the image of limited good', *American Anthropologist* 67 (1965), 293–315.
 - 9 See David B. Grigg, *Population growth and agrarian change: an historical perspective* (Cambridge, 1980), 11–19.
 - 10 See Dieter Groh, 'Strategien, Zeit und Ressourcen: Risikominimierung, Unterproduktivität und Mußpräferenz – die zentralen Kategorien von Subsistenzökonomien', in Dieter Groh, *Anthropologische Dimensionen der Geschichte* (Frankfurt, 1992), 54–113, on subsistence orientation. The classic paper on migration in an investment context is Larry A. Sjaastad, 'The cost and return of human migration', *Journal of Political Economy* 70, Supplement (1962), 80–93.
 - 11 Probably the most radical statement of this territorialist view from a member of the late-eighteenth-century German elites was Johann Gottlieb Fichte's *Der geschlossene Handelsstaat: ein philosophischer Entwurf als Anhang zur Rechtslehre, und Probe einer künftig zu liefernden Politik* (Tübingen, 1800).
 - 12 Ester Boserup, *The conditions of agricultural growth: the economics of agrarian change under population pressure* (Chicago, 1965).
 - 13 James T. Lemon, *The best poor man's country: a geographical study of early Southeastern Pennsylvania* (Baltimore, 1972). In terms of labour time needed for growing grain, income differences between Colonial America and Germany could be as great as 100%: see Alfred Eßer, 'Die Lohn-Preis-Entwicklung für landwirtschaftliche Arbeiter in Deutschland, England und Nordamerika im 18. Jahrhundert', in Tenfelde ed., *Arbeiter*, 101–36. There were also massive differences in land prices and yields.
 - 14 As the overpopulation and migration theorist Wolfgang Köllmann wrote, 'the perceived danger of relative overpopulation should be interpreted as the one phenomenon that triggers off the dialectic processes of economy and demography' (Köllmann, 'Wanderungstheorie', 263–4 (my translation)).
 - 15 For the political context see the important critique by Hermann Rebel, *Peasant classes: the bureaucratization of property and family relations under early Habsburg absolutism 1511–1636* (Princeton, N.J., 1983).

- 16 Bernard Derouet, 'Pratiques successorales et rapport à la terre: les sociétés paysannes d'ancien régime', *Annales ESC* (1989), 173–206. The data shortcomings include systematic biases in the sources (such as applications for emigration that typically understated wealth and men from impartible inheritance regions typically emigrating as bachelors, escaping the notice of the authorities).
- 17 Grubb, 'Immigrant literacy'. See also the time series analysis presented in Georg Fertig, 'Transatlantic migration from the German-speaking parts of Central Europe, 1600–1800: proportions, structures, and explanations', in Nicholas Canny ed., *Europeans on the move: studies on European migration, 1500–1800* (Oxford, 1994), 192–235.
- 18 At least 34 persons from 12 households; Göbrichen had around 50 households when emigration commenced in 1742.
- 19 Sources: manorial tax lists in the Generallandesarchiv Karlsruhe (hereafter GLA), 66/2906-2909; Ernst Hahner, *Ortssippenbuch Göbrichen* (Göbrichen, 1985).
- 20 Von Hippel, *Auswanderung*, 56, 59.
- 21 Most southwest Germans were serfs, who had to apply for permission to leave the jurisdiction of their lords and also to get out of serfdom. The best discussion of southwest German serfdom is Werner Trossbach's 'Südwestdeutsche Leibeigenschaft in der Frühen Neuzeit: eine Bagatelle?', *Geschichte und Gesellschaft* 7 (1981), 69–90.
- 22 $Rho = 0.75^*$, $N = 11$ between number of surviving children and proportion of outmigrating children.
- 23 $Rho = 0.35^\dagger$, $N = 31$.
- 24 Christian Vogel, 'Populationsdichte-Regulation und individuelle Reproduktionsstrategien in evolutionsbiologischer Sicht', in Otto Kraus ed., *Regulation, Manipulation und Explosion der Bevölkerungsdichte* (Göttingen, 1986), 11–30, 17; Markus Mattmüller, *Bevölkerungsgeschichte der Schweiz, Vol. 1. Die frühe Neuzeit, 1500–1700* (Basel, 1987), 425–7.
- 25 Source: machine-readable dataset base on Hahner, *Ortssippenbuch Göbrichen*, including all couples married prior to 1750. There is sometimes no information in the dataset about the beginning of a marriage (the wedding) and its end (the death of the first spouse); these couples have been omitted. In the case of other couples, the date of the wedding was been estimated as the latest possible or the end of the marriage has been estimated as the earliest possible, or the original marriage entry was not included. These marriages have been termed 'inexact'. For the remaining couples, information about the beginning and end of the marriage is known exactly. All the machine-readable family reconstitution forms were examined, and the couples known to have been childless and the no-information couples were deleted. Then for each year between the beginning and the end of the marriage a new form was drawn up recording the year and whether the marriage was 'exact' or 'inexact'. These new forms were then counted by type ('exact' or 'inexact'), and the resulting annual totals were plotted on the figure.
- 26 1699: 34 couples according to GLA 171/1512 (36 in dataset); 1738: 55 according to GLA 180/232 (55 in dataset); 1743: about 50 according to GLA 180/165 (56 in dataset).
- 27 Sources: Göbrichen burial register; Hahner, *Ortssippenbuch Göbrichen*; Heinrich Tölke et al., *Kennzeichen PF: Heimatkunde für Pforzheim und den Enzkreis* (Bad Liebenzell, 1986), 96–7; GLA 229/32175.
- 28 This is what Christian Pfister calls 'Malthusian carrying capacity' (Christian Pfister and Andreas Kellerhals, 'Verwaltung und Versorgung im Landgericht Sternenberg', *Berner Zeitschrift für Geschichte und Heimatkunde* 51 (1989), 151–215).
- 29 What Pfister and Kellerhals call the 'social carrying capacity' (ibid.).

- 30 Estimates between 180 and 250 kg are given in Pfister and Kellerhals, *ibid.*, 180; see also Friedrich-Wilhelm Henning, *Handbuch der Wirtschafts- und Sozialgeschichte Deutschlands* (Paderborn, 1991), 400, and Rainer Beck, *Naturale Ökonomie, Unterfinning: Bäuerliche Wirtschaft in einem oberbayerischen Dorf des frühen 18. Jahrhunderts* (Munich, 1986), 176–85. The grain, in a three-field system, was mostly spelt wheat (*Dinkel*) in the winter field and mostly oats but also some barley in the summer field, with yields of about half the weight of the winter field.
- 31 They are based on the pastor's tithe records for 1731–1732 (1,073 kg/ha), an account for a Göbrichen demesne for 1740–1757 (1,624 kg/ha) and the tithe records for 1792–1797 (969 kg/ha). See Heinrich Tölke, *Göbrichen, Neulingen: Monographie eines Dorfes und einer Landschaft in Norden Pforzheims* (Bad Liebenzell, 1995), Vol. 1, 114–18; the demesne account is in GLA 229/51819. The last figure, however, underestimates the real yields because the grain was auctioned off to the inhabitants, who were of course concerned to pay as little as possible. When the tithe was directly collected by the village authorities after 1838, its returns immediately increased by more than 50%. This has been taken into account: $(1,073 + 1,624 + (969 * 1.5)) / 3 = 1,383.5$.
- 32 Pastor's tithe records 1731–1732, tithe prognoses 1738–1751, demesne balances.
- 33 Henning, *Handbuch*, 807; Andreas Maisch, *Notdürftiger Unterhalt und gehörige Schranken: Lebensbedingungen und Lebensstile in württembergischen Dörfern der frühen Neuzeit* (Stuttgart, 1992), 111; Beck, *Naturale Ökonomie*, 158; Pfister and Kellerhals, 'Verwaltung und Versorgung', 178.
- 34 Clemens Zimmermann, *Reformen in der bäuerlichen Gesellschaft: Studien zum aufgeklärten Absolutismus in Baden, 1750–1790* (Ostfildern, 1983), 30, and sources from Göbrichen.
- 35 Pfister and Kellerhals, 'Verwaltung und Versorgung', 179.
- 36 GLA 171/1512 (visitation protocol, 1699).
- 37 GLA 180/165 (visitation protocol, 1743).
- 38 For a critique of this concept, see Josef Ehmer, *Heiratsverhalten, Sozialstruktur, ökonomischer Wandel: England und Mitteleuropa in der Formationsperiode des Kapitalismus* (Göttingen, 1991).
- 39 *Land-Recht der Fürstenthümer und Landen der Marggraffschafften Baaden und Hachberg* (Durlach, 1710), section 6.
- 40 David W. Sabeau, *Property, production and family in Neckarhausen, 1700–1870* (Cambridge, 1990), 256–8.
- 41 For the purposes of these calculations, I have followed the instructions given by Ulrich Pfister, *Die Anfänge von Geburtenbeschränkung: eine Fallstudie (ausgewählte Zürcher Familien im 17. und 18. Jahrhundert)* (Berne, 1985), 83–7. I have made use of those marriages that existed for the entire period of five years for which the age-specific fertility rate was calculated. In the case of 15- to 19-year-old women, all marriages have been used. Marriages were excluded if the birth year of at least one child was not known. 102 marriages were included. Of these, 41 were contracted between 1604 and 1698, and 61 between 1701 and 1748. For the age group 30–34 years, the difference between the ASF of the women married between the ages of 20 and 24 years and the ASF of those married between 25 and 29 years is significant (Wilcoxon rank test $Z = 2.05$, Prob = 0.04).
- 42 *Ibid.*, 58.
- 43 Hahner, *Ortssippenbuch Göbrichen*, numbers 3728, 1455; GLA 171/1512 (visitation protocol, 1698); GLA 171/1512 (visitation protocol, 1699).
- 44 Sabeau, *Property*, 424–5. See also Sabeau's *Kinship in Neckarhausen, 1700–1870* (Cambridge, 1997), *passim*.

- 45 Tölke, *Göbrichen*, Vol. 1, 222, 282–7.
- 46 Sabean, *Kinship*; on insider/outsider-conflicts see also Sheilagh Ogilvie, *State corporatism and proto-industry: the Württemberg Black Forest, 1580–1797* (Cambridge, 1997).
- 47 $Rho = -0.05$ for wealth in all 496 combinations of two related households in 1736. One exception is the households of siblings, $Rho = 0.07$ in 1701 but $Rho = 0.34$ in 1736. These correlations cannot be tested statistically since the observations are not independent.
- 48 In land transfers involving relatives, the wealth of buyers and sellers was negatively correlated ($Rho = -0.34$). Among non-relatives, there was a small correlation, $Rho = 0.16$; godparents: $Rho = 0.07$. All correlations are not testable.
- 49 I would like to thank Ulrich Pfister for bringing this point to my attention.
- 50 Robert C. Ostergren, *A community transplanted: the trans-atlantic experience of a Swedish immigrant settlement in the upper middle west, 1835–1915* (Uppsala, 1988).
- 51 Compare Aaron Fogleman's remarkable findings on more clustered settlement patterns among emigrants from the Kraichgau area north of Göbrichen; see Fogleman, *Hopeful journeys*, 74. However, it should be noted that these emigrants possibly could be identified precisely *because* they clustered.
- 52 If we combine the 52 households of Göbrichen into pairs and look at all the 1,326 resulting combinations, in only 20 cases were two households related (cousins or closer) and sent out members to America, while in 58 cases families were not related but both included emigrants to America, and 248 were related and produced no emigrants. In terms of correlations, $\Phi = 0.03$.
- 53 No census-type material is available for Göbrichen. However, contemporary statements about the number of households dovetail perfectly with the number of reconstitutable families; see note 26, above.
- 54 Political offices were those of *Schultheiß* (mayor), *Anwalt* (vice-mayor), and *Gerichtsmann* (council member). The godparenthood index measures how frequently per year a household member was called on as a godparent between 1720 and 1759 (source: parish registers, Evangelische Kirchengemeinde Göbrichen). The kinship index counts the households in the village with which a close kinship relation existed in 1736, i.e. husband or wife being first cousins or equally close kin with either the husband or the wife in the other household.
- 55 An alternative explanation might be that male immigrants into Göbrichen were more likely to be social outsiders. However, this hypothesis is not confirmed by a differential analysis of immigrant and non-immigrant households.
- 56 Bernard Bailyn, *The peopling of British North America: an introduction* (London, 1987), 20.
- 57 Werner Hacker, *Auswanderungen aus Baden und dem Breisgau: obere und mittlere rechtsseitige Oberrheinlande im 18. Jahrhundert archivalisch dokumentiert* (Stuttgart, 1980), 204, 207 and no. 9290.
- 58 Ironically, even recently historians have echoed such unsupported rumours. For a more elaborate discussion, see my article “‘Die mit dem Juden-Spieß so oft aus- und einfahren’: transatlantische Kommunikation, territoriale Bürokratie und pietistische Moral im 18. Jahrhundert”, *Tel Aviver Jahrbuch für deutsche Geschichte* 27 (1998), 31–46.
- 59 For sources, see my contribution to Tölke, *Göbrichen*, Vol. II, 694–6.