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Reconsidering Indentured Servitude: European Migration and the Early American Labor Force, 1600–1775

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In the literature of early American history, transatlantic European migration—and more specifically the recruitment and deployment of European labor—is overwhelmingly identified with the phenomenon of indentured servitude.[1] Indentured servitude was "an important early solution to the labor problem in many parts of English America," and was "widely adopted," becoming "a central institution in the economy and society of many parts of colonial British America." In the Southern colonies it furnished "the bulk of labor until slavery began to predominate."[2]

This essay offers new estimates, and an intensive synthesis of existing estimates, of the overall numbers and demographic characteristics of indentured servants landing in the three main regions of reception of 17th- and 18th-century English and other European migration to the North American mainland (New England, the Chesapeake, and the Delaware Valley). The essay uses decade-by-decade measures of migration, numerical proportion of servants in migrant population, and mortality and contract length estimates, to chart the relative contribution of white servitude to early American labor force composition. It also distinguishes among regional cultures of work and social-economic conditions on both sides of the Atlantic in explaining propensity to

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[1]Aaron Fogleman provides the most recent general statement of the theme: "For the first two centuries of the history of British North America, one word best characterizes the status of the vast majority of immigrants—servitude." Aaron S. Fogleman, "From Slaves, Convicts and Servants to Free Passengers: The Transformation of Immigration in the Era of the American Revolution," *Journal of American History*, 85 (1998), 43. Fogleman's interpretive emphasis on the linkage of servitude to immigration accurately reflects social reality, for there is little evidence that servitude *per se* had any significant incidence as a condition of working life among the non-African native-born. As we shall see, forms of bound labor did exist among native-born whites—apprenticeship, pauper servitude, debt servitude, compensatory servitude by those convicted of crimes—but apart from apprenticeship formal binding was quite incidental in creole work relations. See, for example, Farley W. Grubb, "Immigration and Servitude in the Colony and Commonwealth of Pennsylvania: A Quantitative and Economic Analysis" (unpublished PhD dissertation, University of Chicago, 1984), 163–165. Socially, culturally and legally, indentured servitude was identified with immigration.

[2]David W. Galenson, "The Settlement and Growth of the Colonies: Population, Labor and Economic Development," in Stanley L. Engerman and Robert E. Gallman, eds., *The Cambridge Economic History of the United States* (New York, 1996), I, 158; "The Rise and Fall of Indentured Servitude in the Americas: An Economic Analysis," *Journal of Economic History*, 44 (1984), 1. Jacqueline Jones, *American Work: Four Centuries of Black and White Labor* (New York, 1998), 31. See generally P.C. Emmer, ed., *Colonialism and Migration: Indentured Labor before and after Slavery* (Dordrecht, 1986).

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migrate and the character of the European labor force created as a result. Though not concerned with enslaved labor at this stage of analysis, the essay offers some assessment of the "fit" of indentured servitude and slavery as labor forms.

This essay intentionally restricts its focus to the North American mainland.[3] The reason is uncomplicated. Historians have pointed to a transition to a predominantly free workforce in the early American republic from a predominantly unfree workforce in the mainland's colonial era as a major vindication of the reality of Revolutionary era egalitarianism. The eventual disappearance of indentured servitude in the early 19th century has been treated as an important signifier of republican America's self-differentiation from the old regime.[4] My interest here is in investigating the empirical basis for such claims about labor force composition, social structure and political culture, as they relate to indentured servitude. I conclude that migrant indentured servitude, though undoubtedly an important source of colonial era labor power, was rather less important than historians have assumed. Correspondingly, the trajectory of American political culture in the late 18th and early 19th century becomes less clear-cut than liberal historiography supposes.

Numbers

Stripped to bare transactional essentials, indentured servitude describes a contract committing one party to make a series of payments to or on behalf of the other—settlement of transport debt, subsistence over the (negotiable) contractual term, and final payment in kind or, less usually, cash at the conclusion of the term. In exchange the payee agrees to be completely at the disposal of the payor, or the payor's assigns, for

to the Subſcriber, in *Blandford*, may depend on meeting with good ncouragement. ANDREW HAMILTON.

Juſt ARRIVED, *at* LEEDS *Town, the Ship* JUSTITIA, *with about one Hundred healthy*

SERVANTS,

Men, Women, and Boys, among which are many Tradeſmen, *viz.* Blackſmiths, Shoemakers, Tailors, Houſe Carpenters and Joiners, a Cooper, a Bricklayer and Plaiſterer, a Painter, a Watchmaker and Glazier, ſeveral Silverſmiths, Weavers, a Jeweller, and many others.

The Sale will commence on *Tueſday* the 2d of *April*, at *Leeds* Town, on *Rappahannock* River. A reaſonable Credit will be allowed, giving Bond, with approved Security, to THOMAS HODGE.

** I have an aſſorted Cargo of GOODS from *London*, ſuitable for the Seaſon (about two Thouſand Pounds Sterling worth) which I will lump off, on reaſonable Terms, at a Credit with good Security.

Juſt IMPORTED, *and to be* SOLD *by the Subſcribers, in* NORFOLK,

[3]Migration to the British West Indies does not therefore feature in this analysis.

[4]Aaron Fogleman sees the American Revolution as a transformative event in the history of freedom in North America. See "From Slaves, Convicts and Servants to Free Passengers," 43–76. More critical, David Montgomery has nevertheless pointed to the period from the 1770s to the 1820s in America as one of decisive repudiation of many hated hierarchies common in "traditional" society, and has affirmed "the durable legacy of egalitarian practice" left by the Revolution. See his *Citizen Worker: The Experience of Workers in the United States with Democracy and the Free Market during the Nineteenth Century* (New York and Cambridge, 1993), 5, 13–51.

performance of work, for the term agreed.[5] All aspects of performance of the transaction were secured by law.[6]

Immigrant Europeans working under indenture can be found in all regions of mainland America during the 17th and 18th (and well into the 19th) centuries.[7] Considered for the numerical significance of its contribution to labor supply in the British mainland colonies, however, immigrant indentured servitude is important primarily for its association with two periods of substantial flow of labor into two mainland regions: the Chesapeake (Virginia and Maryland) between 1630 and the early 1700s; and the Delaware Valley (primarily Pennsylvania, Delaware and New Jersey, but

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[5]During the 17th century, commercial migrant servitude in the Chesapeake region typically took the form of the migrant's contractual commitment to labor for a negotiated period and on terms agreed with a shipper prior to embarkation. The shipper, either a consigning merchant or a shipmaster, would recover transportation costs by selling the servant's contract on arrival. In the case of migrants who neither paid their own passage nor negotiated individual service contracts prior to departure, standard terms and conditions of servitude that institutionalized local practice ("the custom of the country") were prescribed by colonial legislation and administered through the courts. During the 18th century, a variation on 17th century practice developed in the increasingly important Delaware Valley labor market, in which the migrant did not commit to a future service contract prior to embarkation but instead indemnified the shipper by agreeing to enter a service contract on terms sufficient to liquidate the transportation debt within a specified period after arrival should other means to satisfy the debt (such as advances or gifts from family, friends or former neighbors) fail to materialize. This so-called "redemptioner" system, which Georg Fertig likens to *Gesindedienst* (the German form of service) and which might also be viewed as a variation on debt servitude, dates from the 1720s and was dominant in the migrant servant trade by the 1750s. See David W. Galenson, *White Servitude in Colonial America: An Economic Analysis* (Cambridge and New York, 1981), 3–4; Farley Grubb, "The Auction of Redemptioner Servants, Philadelphia, 1771–1804: An Economic Analysis," *Journal of Economic History*, 47 (1988), 583–602; Robert J. Steinfeld, *The Invention of Free Labor: The Employment Relation in English and American Law and Culture, 1350–1870* (Chapel Hill, 1991), 198; Aaron S. Fogleman, *Hopeful Journeys: German Immigration, Settlement, and Political Culture in Colonial America, 1717–1775* (Philadelphia, 1996), 73–79; Georg Fertig, "Eighteenth-Century Transatlantic Migration and Early German Anti-Migration Ideology," in Jan Lucassen and Leo Lucassen, eds. *Migration, Migration History, History* (Berne, 1997), 271–90. A further innovation appearing in the 1770s was the "indenture of redemption," which comprised an assignable pre-negotiated agreement to serve that could be voided by the migrant if better terms or unexpected resources were available on arrival. See Farley Grubb, "Labor, Markets and Opportunity: Indentured Servitude in Early America, a Rejoinder to Salinger," *Labor History*, 39 (1998), 237, n.14. Rather than depend on merchants, migrating farmers or planters might themselves directly recruit servants to accompany them, or return to Europe once established to recruit additional labor through family or community connections for their own use. Examples of both practices can be found in 17th-century New England and in early migrations into the Delaware Valley. In most cases, however, the facilitation of European migration through labor contracts was a fully commercialized endeavor. It is also judged to have been "efficient" in economic terms, which is to say that sufficiently competitive markets existed among both shippers and purchasers to preclude wholesale exploitation of migrants. See Grubb, "Labor, Markets and Opportunity," 237, 239–41; Fertig, "Eighteenth-Century Transatlantic Migration," 282. Jan Lucassen and Leo Lucassen observe the emerging tendency in analysis of indentured migrant servitude to avoid classifying the indentured migrant as "victim" contrasted with the self-improving "free" migrant. See their "Migration, Migration History, History: Old Paradigms and New Perspectives," in *Migration, Migration History, History*, 9–37, at 12–13. Stanley Engerman is more cautious. See his "Servants to Slaves to Servants: Contract Labour and European Expansion," in Emmer, *Colonialism and Migration*, 269.

[6]For a recent assessment of the efficacy of legal oversight, see Christine Daniels, " 'Liberty to Complaine': Servant Petitions in Colonial Anglo-America," in Christopher Tomlins and Bruce H. Mann, eds., *The Many Legalities of Early America* (Chapel Hill, 2001).

[7]According to Farley Grubb, "Organized markets for European immigrant servants in North America began in Jamestown around 1620 and ended in the ports of Philadelphia, Baltimore, and New Orleans around 1820." See his "The Disappearance of Organized Markets for European Immigrant Servants in the United States: Five Popular Explanations Reexamined," *Social Science, History*, 18 (1994), 1–30, at 1. See also Steinfeld, *Invention of Free Labor*, 122–46.

with continuing inflow also to Maryland) between roughly 1710 and the early 1770s. In the other defined regions of European settlement—New England (where the influence of transatlantic migration was confined primarily to one convulsive spasm between 1630 and 1640) and the Appalachian back country (a component of the same 18th-century flow that helped populate the middle Atlantic coastal region), few migrants entered as indentured servants and the institution did not develop any lasting presence.[8]

Historians have offered widely varying accounts both of the round numbers of Europeans migrating to America during the 17th and 18th centuries and of the likely incidence of servants in migrant populations. Richard S. Dunn, for example, estimates a total servant importation to British America (that is, Caribbean as well as mainland colonies) of roughly 350,000 between 1580 and 1775.[9] Philip Morgan has suggested that a figure of 500,000 servants in a total European migration of 750,000, or two-thirds of all migrants, is nearer the mark.[10] Such disparities suffice to indicate both

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[8]In the case of New England, servants are clearly present among the *c.* 20,000 migrants who entered Massachusetts Bay during the decade after 1630, but not in great numbers. There is little evidence of an organized trade in servants to New England of any significance (there is some scattered evidence in the early 18th century of unsuccessful efforts to encourage one—see, for example, Province Laws, 1708–9, ch. 11, "An Act to Encourage the Importation of White Servants"), and most migrant servants appear to have been recruited directly by migrant heads of household through family and community networks. Scholars' estimates of the numbers of servants in the migrant stream have concentrated on the male population, varying in incidence from 1 in 3 to 1 in 6 of male migrants. Given that roughly 60% of migrants were males and (again roughly) that male servants outnumbered female by 3 to 1, this suggests that servants constituted no fewer than 12.5% and no more than 25% of the Great Migration. For the sources of these estimates, see David Hackett Fischer, *Albion's Seed: Four British Folkways in America* (New York, 1989), 16, 27, 28; Richard Archer, "New England Mosaic: A Demographic Analysis for the Seventeenth Century," *William and Mary Quarterly*, 3rd ser., 47 (1990), 477–502, at 480, 486–7; Roger Thompson, *Mobility and Migration: East Anglian Founders of New England, 1629–1640* (Amherst, MA, 1994), 122–23. Richard S. Dunn argues that 15% of 1630s migrants to New England were servants and that these servants represented 33% of "the initial work force," but does not define work force (the conceptual utility of "work force" in early America is discussed further below). See Dunn, "Servants and Slaves: The Recruitment and Employment of Labor," in Jack P. Greene and J.R. Pole, eds., *Colonial British America: Essays in the New History of the Early Modern Era* (Baltimore, 1984), 157–94, at 160. Daniel Vickers concludes that "almost 17 percent" of 1630s migrants were servants. See *Farmers and Fishermen: Two Centuries of Work in Essex County, Massachusetts, 1630–1850* (Chapel Hill, 1994), 37. Aaron Fogleman offers "about 16 percent" in "From Slaves, Convicts, and Servants to Free Passengers," 46. David Cressy inflates these estimates, arguing that "a significant proportion" of New England settlers migrated as servants, by which he appears to mean as many as 25%. See his *Coming Over: Migration and Communication Between England and New England in the Seventeenth Century* (Cambridge and New York, 1987), 52–53. Though at the top end of estimates, it is conceivable that 25% of 1630s migrants could have been servants, it is not plausible to maintain that servants persisted at that level in the population after the flow of migration slowed virtually to nothing after 1641. Allowing for moderate mortality (2 per 1000), and an average term of 4 years' service, it is highly unlikely that there were more than 2000 migrant servants in New England in 1640 (14.75% of the white population at that time). Thereafter, servant numbers would have decreased rapidly (to no more than 2.5% of population by the end of the 1640s). On the scarcity of servants after 1640, see Vickers, *Farmers and Fishermen*, 55–58 (Vickers offers 5% of population as an absolute upper bound for servants in the later 17th century and sets his lower bound at under 2%). Lawrence W. Towner's 1955 dissertation, finally published as *A Good Master Well Served: Masters and Servants in Colonial Massachusetts, 1620–1750* (New York, 1998) is a rich narrative of servant life in New England, and conveys the impression that the institution was well-established in the region, but offers no quantitative evidence to support the impression. New England demography is discussed further at pp. 23–25 below.

In the case of the 18th century's Appalachian backcountry migrant stream, Fischer comments that "remarkably few came in bondage." *Albion's Seed*, 614.

[9]Dunn, "Servants and Slaves," 159. Dunn estimates 315,000 came from the British Isles and Ireland, including 50,000 convicts, and 35,000 from Germany.

[10]Philip D. Morgan, "Bound Labor," in Jacob E. Cooke *et al.*, eds., *Encyclopedia of the North American Colonies* (New York, 1993), II, 18.

the degree to which early American migration and population studies remain unavoidably dependent on crude approximations and estimates, and the effects of that dependence. Nevertheless, as specialists have refined their methods, a somewhat narrower range of estimates has begun to emerge in which, though necessarily still approximations, one may repose a degree of confidence. For the mainland alone, through 1780, current estimates suggest a total European migration of between 470,000 and 515,000. Of these some 54,500 were involuntary migrants (convicts or prisoners), the vast majority of whom entered North America during the 18th century. Of the remaining voluntary migrants, the analysis undertaken in this essay suggests some 48% were committed to an initial period of servitude by indenture or other arrangement. This status was substantially more common during the 17th century, when it described on average 60–65% of voluntary migrants, than the 18th century, when it described on average 40%.[11] In addition, between 285,000 and 310,000 enslaved Africans entered the mainland colonies, the vast majority during the century after 1680.[12]

The Chesapeake

Some refinement of these aggregate numbers may be attempted—and measures to assess their significance established—by examining the migration and population history of particular regions and periods. Thus, for the 17th century Henry Gemery has estimated a total European (British) migration of 155,000 (1630–1700), of whom 39,000 went to Northern colonies and 116,000 to the South (upper and lower).[13] Working with Gemery's figures, Russell R. Menard has produced a decadal series for immigration to the Chesapeake that, together with decadal population estimates, enables one to develop both decadal servant migrant numbers and shifts in the proportion of servants in total population over time.[14] The available data do not allow any form of direct measurement of the incidence of indentured servitude in settler populations—the only direct indication of the incidence of servitude is a 1625 census taken in Virginia that showed a servant population somewhat in excess of 40% of total population[15]—but the incidence can be inferred from the overall immigration and population estimates. As we have seen, historians have suggested that on average between half and two-thirds of all European migrants to mainland America were indentured servants, with fluctuations up to and even beyond 80%, not unimaginable for particular places at particular moments. In light of the estimates constructed above, the overall "half to two-thirds" range seems too high, certainly as a percentage of voluntary migrants, and is only feasible (and then only in the lower third of the range,

[11]On involuntary European migration (transported convicts and other prisoners), see A. Roger Ekirch, *Bound for America: The Transportation of British Convicts to the Colonies, 1718–1775* (Oxford, 1987) 26–7, 70–132; Fogleman, "From Slaves, Convicts, and Servants to Free Passengers." The global figures summarized in the text have emerged from a synthesis of a number of sources. For full details, see Appendix, I, "European Migration to Mainland America, 1600–1780, and the Incidence of Indentured Servitude: Estimates and Sources."

[12]On Africans, see Bailyn, *Voyagers to the West*, 25–6; Fogleman, "From Slaves, Convicts, and Servants to Free Passengers," and "Migration to the Thirteen British North American Colonies," 697–9; Philip D. Curtin, *The Atlantic Slave Trade: A Census* (Madison, 1969), 137.

[13]Gemery, "Markets for Migrants," 40.

[14]Menard, "British Migration to the Chesapeake Colonies," 104–5 (Table 2 and 3); McCusker & Menard, *Economy of British America*, 136 (Table 6.4).

[15]Dunn, "Servants and Slaves," 159.

Table 1. European migration, servant migration and population estimates, Maryland and Virginia, 1600–1700 (in thousands)

Decade ending	Maryland		Virginia		Total Chesapeake servant migrants	Total white population end of each decade
	All migrants	Servant migrants	All migrants	Servant migrants		
1610*			1.5	1.20	1.20	0.3
1620*			3.0	2.40	2.40	0.9
1630*			4.0	3.20	3.20	2.4
1640	0.7	0.56	8.2	6.56	7.12	8.0
1650	1.8	1.44	6.0	4.80	6.24	12.4
1660	4.6	3.68	11.6	9.28	12.96	24.0
1670	12.2	9.76	6.5	5.20	14.96	38.5
1680	12.4	9.92	8.1	6.48	16.40	55.6
1690					10.64	68.2
1700					11.12	85.2

* Approximation.

through 54%) if all convict migrants are assumed to have undergone a period of indentured servitude.[16] But it is likely that in the 17th-century Chesapeake the proportion of servants in the landed immigrant population did indeed approach 80%. Therefore in the estimates that follow I have assumed that a consistent 80% of all Chesapeake migrants were indentured servants. Table 1 expresses the estimated number of incoming servants. For the century the total is just over 86,000.[17]

To estimate the proportion of servants in a regional population at any given moment requires further adjustments to produce an average per annum from the estimated landed migrants for each decade, allowing for term of contract and for attrition—that is, "seasoning" (malaria) and general mortality. As Table 2 indicates, the result is a more or less continuous decline in the incidence of indentured servitude in population,

[16] Ekirch's work cautions *against* this assumption. See *Bound for America*, 119–20. However, Ekirch does conclude that the majority of transported convicts were indentured to labor on arrival (at 120), which allows us to conclude that the lower end of the range is feasible. See also Farley Grubb, "The Transatlantic Market for British Convict Labor," *Journal of Economic History*, 60 (2000), 94–122. It is worth noting that the higher the proportion of transported convicts involved in indentured servitude, the more comprehensible (whether justified or not) become contemporary descriptions of the character of servants in general, and the more comprehensible also the severity of disciplinary penal and criminal sanctions embodied in local legislation governing servitude. "Honest hired servants are treated as mildly in America every where as in England: But the Villains you transport and sell to us must be ruled with a Rod of Iron." Benjamin Franklin, "A Conversation on Slavery" (30 Jan 1770), in William B. Willcox, ed., *The Papers of Benjamin Franklin* (New Haven, 1973), XVII, 42.

[17] Data for Table are derived from sources detailed in n. 14 above. Menard suggests that "at least 70 percent" of Chesapeake migrants were indentured servants. "British Migration to the Chesapeake Colonies," 105–6. Other estimates of 17th-century migration to the Chesapeake range from 100–150,000, and place the incidence of servants in the range 70–85% (see Appendix I, and also Lois Green Carr, "Emigration and the Standard of Living: The Seventeenth Century Chesapeake," *Journal of Economic History*, 52 (1992), 271–91, at 272. See also Jacqueline Jones, *American Work*, 31. (Jones appears to suggest that the total number of servants arriving in the Chesapeake during the 17th century lies in the range of 130,000–150,000, which would place overall migration in the range 150,000–200,000. These figures are not supported in any other source.)

Table 2. European servant migration and persistence in population, Maryland and Virginia, 1600–1700 (in thousands)

Decade ending	No. of servants migrating[1]	Landed servant population[2]	Servant pop. after attrition @32.8%[3]	White pop. @ end of decade	% Servant
1610*	1.20	0.60	0.40	0.3	
1620*	2.40	1.20	0.80	0.9	
1630*	3.20	1.60	1.07	2.4	44.5
1640	7.12	3.56	1.79	8.0	22.4
1650	6.24	3.12	2.09	12.4	16.8
1660	12.96	6.48	4.35	24.0	18.1
1670	14.96	7.48	5.02	38.5	13.0
1680	16.40	8.20	5.51	55.6	9.2
1690	10.64	5.32	3.57	68.2	5.2
1700	11.12	5.56	3.77	85.2	4.4

* Approximation.
[1] From Table 1.
[2] Column 1 adjusted to show servant population for any one year within the decade allowing for persistence through average contract length (no. migrating ÷ 10)(× 5).
[3] See Appendix II.

from near majority at the beginnings of sustained migration in the late 1620s, to somewhere in the range of 4–8% by the end of the century.[18]

The decline in proportionate significance of migrant servants in population over the course of the 17th century is less surprising than the implication that at no time after the 1620s did indentured servants even approach a majority of the colonizing population, that by mid-century they comprised less than one-fifth of population, and that by the end of the century they were fewer than 5%. Even the most generous alternative estimate suggests that migrant servants comprised no more than one-third of population at mid-century and no more than 8% by the end.[19] The phenomenon that accounts for this, particularly the rapid decrease after mid-century in the face of strong

[18]On term of service in the 17th century Chesapeake, see Horn, *Adapting to a New World*, 66–67; Galenson, *White Servitude*, 102; Gloria L. Main, *Tobacco Colony: Life in Early Maryland, 1650–1720* (Princeton, 1982), 98–9. The average for contracts concluded in England appears to have been $4\frac{1}{2}$ years. See David Eltis, "Seventeenth Century Migration and the Slave Trade: The English Case in Comparative Perspective," in Lucassen and Lucassen, eds., *Migration, Migration History, History*, 102. To the extent that the servant population contained a significant proportion of minor children migrating without entering indentures and serving on arrival by "custom of the country," this average length should be revised upward. See Edmund Morgan, *American Slavery, American Freedom: The Ordeal of Colonial Virginia* (New York, 1975), 216. For the basis of the seasoning and mortality estimates used in these tables, see Appendix II, "Seasoning and General Mortality Estimates: Chesapeake Region." For the differential effects of alternative contract term assumptions on the calculation of servant incidence in the general population presented in Table 2, see Appendix III, "Supplementary Estimates," Table A1.

[19]Jacqueline Jones has speculated that migrant servants comprised up to 50% of the Chesapeake population throughout the 17th century. Jones, *American Work*, 62. This figure is not supported by any reasonable migration/mortality/contract term assumptions and thus appears unwarranted. Alternatives based on reasonable assumptions calculated to reflect different seasoning/mortality patterns, longer average contracts, and heavier migration rates do produce variation in the figures, but the variation decreases significantly over time. For these alternative estimates see Appendix III, Table A1.

Table 3. Indentured servants in the Chesapeake labor force, 1640–1700 (in thousands)

Decade ending	White population	Population in labor force (%)	White labor force	White servant population	Servants as % of labor force
1640	8.0	75.6	6.05	1.79	29.58
1650	12.4	71.4	8.85	2.09	23.62
1660	24.0	66.5	15.97	4.35	27.23
1670	38.5	57.7	22.22	5.02	22.59
1680	55.6	58.1	32.3	5.51	17.06
1690	68.2	51.5	35.12	3.57	10.16
1700	85.2	45.7	38.93	3.77	9.68

migration rates, is the development of a local reproducing population and eventually of absolute population growth through natural increase.[20]

If we adjust these estimates by revising our population figures to produce an estimate of labor force participation (numbers of individuals contributing directly to production), using the proportions suggested in 1978 by Terry Anderson and Robert Thomas[21] we arrive at the following (Table 3): in 1640 servants comprised less than one-third of the labor force; in 1670 less than a quarter; and by 1700 no more than one-tenth. Importantly, as Anderson and Thomas themselves state, these calculations of labor force participation "are based upon a concept of labor force as found in modern developed countries"[22] in which work is seen "as a discrete activity in a distinct

[20]Servants persist as a significant component of population for somewhat longer in 17th century Maryland than in Virginia, and remain more numerous in the 18th century. See Appendix III, Table A2.

[21]Anderson and Thomas, "The Growth of Population and Labor Force," 290–312, at 304–5 and Tables A-1 & A-2.

[22]*Ibid.*, 304. Anderson and Thomas hypothesize that the proportion of population in the labor force is equivalent to all adult males plus 10% of adult females. Restating this hypothesis in terms of an actual population of men, women and children, they estimate that the components of labor force at any given moment will be all single males under 60 plus a proportion (declining over time from 44% to 31%) of "reproducibles" (that is, paired males and females, and children). Applied to the census figures of Virginia in 1625 their calculation yields a labor force that includes 85% of all adult males present in the colony, 44% of adult females and 44% of the children. Others have argued that total adult population is a better measure of labor force equivalence for the early American economy. See Alice Hanson Jones, *Wealth of a Nation to Be: The American Colonies on the Eve of the Revolution* (New York, 1980), 56. In recent work offering estimates of workforce for the 18th century, Carole Shammas estimates workforce equivalents on the basis of differential participation rates of a population disaggregated by age and race (whites aged 16+, 90%; whites 10–15, 45%; blacks 10+, 85%). Shammas also offers lower bound estimates based on uniform white adult participation rates of 85% and blacks 10+ of 80%. See Carole Shammas "Defining and Measuring Output and the Workforce in Early America" (forthcoming). Her results show average workforce participation rates declining over the 18th century from *c.*56% to *c.* 52.5% for the mainland as a whole, but with pronounced regional variation (see below). Shammas hypothesizes that 17th-century rates were substantially higher, which suggests that the Anderson and Thomas figures indeed understate Chesapeake participation rates, especially for the second half of the 17th century. There is also reasonable 17th-century evidence from both New England and the Chesapeake, and from the late 17th century Delaware Valley, that migrant and settler children were considered capable of productive work at age ten and even younger, and thus that the participation rate of children 15 and under is likely higher during the first century of settlement than the 44–45% suggested by Anderson and Thomas and, indirectly, by Shammas. See Appendix IV, "Servants' Ages." Shammas does note that participation rates of children under 16 tended to increase relative to those of the adult component of population during the 18th century. This reflects the increasingly youthful character of the population of the major regions of settlement outside New England (see table next page)

Table 4. Slaves[1] and servants in population: Chesapeake colonies (in thousands)

Year	Chesapeake African population	Servant population[2]	Total	Total population	Slave and servant (%)
1610		0.40	0.40	0.3	
1620		0.80	0.80	0.9	
1630	0.1	1.07	1.17	2.5	46.8
1640	0.1	1.79	1.89	8.1	23.3
1650	0.3	2.09	2.39	12.7	18.8
1660	0.9	4.35	5.25	24.9	21.1
1670	2.5	5.02	7.52	41.0	18.3
1680	4.3	5.51	9.81	59.9	16.4
1690	7.3	3.57	10.87	75.5	14.4
1700	12.9	3.77	16.67	98.1	17.0
1710	22.4			123.7	18.1
1720	30.6			158.6	19.3
1730	53.2			224.6	23.7
1740	84.0			296.5	28.3
1750	150.6			377.8	39.7
1760	189.6			502.0	37.7
1770	251.4			649.6	38.7
1780	303.6			786.0	38.6

[1] Numbers assume the African population is wholly enslaved.
[2] From Table 2, column 4.

economic realm."[23] To the extent that work in early America was not thus ideologically and structurally compartmentalized—to the extent, that is, that virtually everyone worked—the concept of labor force as a distinct segment of population will be anachronistic and hence of limited value. There exists a high probability, therefore, that figures derived from modern definitions of labor force will substantially understate 17th-century participation rates.[24] The closer "labor force" approaches total population, the higher the labor force participation rate will be, and therefore the lower the proportionate contribution of indentured servants to labor force.

The addition of estimates for the Chesapeake region's growing population of enslaved Africans allows us to measure the overall size of the explicitly bound component of the population.[25] As Table 4 indicates, immigrant servants accounted for a majority of the Chesapeake's bound population until the 1680s, the same decade in which the combined population of servants and slaves reached its lowest-ever level at less than

Percentage estimates of population in work force, 1700–1790, by region (lower–upper bound)

Year	New England	Mid-Atlantic	South	Total
1700	50.4–52.9	55.1–58.0	58.5–61.7	54.8–57.7
1755	50.9–53.4	51.8–54.4	51.8–54.7	51.5–54.2
1774	52.2–54.9	51.8–54.5	50.5–53.3	51.3–53.4
1790	52.2–54.9	50.9–53.5	50.8–53.5	51.3–53.9

[23] Joyce, "The Historical Meanings of Work," 2.

[24] Understatement will be likely even if we confine work to the conventional realm of "production." As McCusker and Menard put it, "the conventional definition of the labor force as 'all persons producing marketable goods and services' seems inappropriate to economies in which people's productive energies were focused in large part on subsistence rather than on the market." See McCusker and Menard, *The Economy of British America*, 236.

[25] African population figures are taken from McCusker and Menard, *The Economy of British America*, 136, Table 6.4.

Table 5. Slaves and servants in the Chesapeake labor force, 1640–1700 (in thousands)

Decade ending	White labor force	Total labor force 1[1]	Total labor force 2[1]	Slave/servant population[2]	%[1]	%[2]
1640	6.05	6.1	6.15	1.89	31.0	30.7
1650	8.85	9.0	9.15	2.39	26.5	26.1
1660	15.97	16.4	16.87	5.25	32.0	31.1
1670	22.22	23.4	24.52	7.52	32.1	30.7
1680	32.3	34.2	36.6	9.81	28.7	26.8
1690	35.12	38.2	42.4	10.87	28.5	25.6
1700	38.93	44.5	51.8	16.67	37.4	32.2

[1] Two estimates are presented, the first calculated according to Anderson and Thomas's estimates of proportionate black population participation in labor force, the second calculated on the assumption that the entire black population should be included in labor force.
[2] The estimate for combined slave and servant population assumes that the entire African population was enslaved.

15% of total population and not much more than 25% of the conceptually problematic "labor force" component.[26] Thereafter, while servant numbers continued to decline, rising slave imports and particularly natural increase saw rapid growth in the African population.

If we now express the combined count of servants and slaves as a proportion of "labor force" (here again calculated on the basis suggested by Anderson and Thomas but substituting our figures), we arrive at the figures shown in Table 5. They indicate that bound labor accounts fairly consistently for between 25% and 35% of labor force in the Chesapeake during the 17th century, the rise in the African-American population in the last quarter of the century partly substituting for the declining numbers of servants during that period.[27]

All of these figures are, by their nature, necessarily approximations. They do, however, provide an important degree of perspective on the simple magnitudes that historians have tended to cite, notably total numbers of servant immigrants over the entire colonial period, to "prove" indentured servitude's overweening significance. Their impact is two-fold: on the one hand they confirm that for much of the 17th century indentured servitude was certainly significant enough a presence in the Chesapeake to shape the social relations of Europeans at work. On the other hand, they also confirm that even by mid-century substantially more work was being performed outside those relations than within them.[28]

[26] See Table 5.

[27] On the timing of that substitution, see Grubb and Stitt, "Liverpool Emigrant Servant Trade," 1–31; Gloria L. Main, "Maryland in the Chesapeake Economy, 1670–1720," in Land *et al.*, eds., *Law, Society and Politics in Early Maryland*, 134–52; Russell R. Menard, "From Servants to Slaves: The Transformation of the Chesapeake Labor System," *Southern Studies*, 16 (1977), 355–90. David Eltis stresses the importance of long-term relationships between English demography and voluntary migration patterns, the slave trade, and plantation labor demands. See his "Seventeenth Century Migration and the Slave Trade," and also "Labor and Coercion in the English Atlantic World from the Seventeenth to the Early Twentieth Century," *Slavery and Abolition*, 14 (1993), 207–26.

[28] This relative decline in the demographic prominence of migrant indentured servitude in the culture of work cannot be attributed to the effects of a turn to the more absolute servitude of slavery, for that did not come decisively until the end of the century, and when it did come it was as a replacement rather than an addition. African slavery, in other words, substituted for servitude, it did not add a deeper layer to it. The declining demographic prominence of migrant indentured servitude reflects the general expansion of population, increasingly creole, amongst whom unfree immigrant servants formed a decreasing minority.

Table 6. Immigration to the Delaware Valley, 1680–1780 (in round numbers)

Decade	British	German	Southern Irish	Northern Irish	Total arrivals	Arrivals in Philadelphia
1670/9	1500				1500	
1680/9	11000				11000	
1690/9	3000				3000	
1700/9	2500				2500	
1710/9	5000	1000			6000	
1720/9		2161	723	296	3180	3000
1730/9		12477	3328	2510	18315	17000
1740/9		14201	4106	5225	23532	24000
1750/9		24971	3639	8099	36709	36000
1760/9	4215	7712	3811	12067	27805	21000
1770/9	2830	4211	1689	7202	15902	13000

The Delaware Valley

Let us turn now to the 18th century and to the second major site of indentured servant importation—the Delaware Valley through the ports of Newcastle and Philadelphia. Table 6 presents rough decadal estimates of immigration to the Delaware ports.[29] It reflects the initial English and Welsh movement of the late 17th century, followed by the switch to predominantly German and Irish migration in full swing by the late 1720s, and the resumption of British (predominantly English, some Scottish) migration after 1760. Using these migration estimates, one can develop similarly rough estimates for the numbers of migrants arriving under indenture. In contrast to the 17th-century Chesapeake, where the estimates presented assumed a uniform 80% of European migrants entered as servants, the better-developed secondary literature on Philadelphia's intake (Table 7) allows somewhat more refined estimates.[30] From here we may proceed, as before, to construct a rough measure of the servant population.[31]

[29]Sources: for the British column, through 1720, see Fischer, *Albion's Seed*, 421; for 1760–76, see Bailyn, *Voyagers to the West*, 206–7, 230–1 (my estimate assumes that the totals Bailyn reports for the period 1773–76 represented constant flows for the previous ten years as well); for the German column, see Fogleman, "Migrations to the Thirteen British North American Colonies," 702 (Wokeck, "German Immigration to Philadelphia," 260–1, offers an estimation of Philadelphia arrivals that is consistent in most respects with these figures). For the Northern and Southern Irish columns see Fogleman, 705, and generally Wokeck, "German and Irish Immigration," 141. In *Trade in Strangers: The Beginnings of Mass Migration to North America* (University Park, Pennsylvania, 1999), 45–6, 172–3, Marianne Wokeck has reported revised estimates of German and Irish migration to Philadelphia and the Delaware Valley, respectively, that in some respects differ from Fogleman's figures. For the effect of these on the results reported here, see discussion in Appendices I and II, this essay. For Philadelphia arrivals, see Susan Klepp, "Demography in Early Philadelphia, 1690–1860," *Proceedings of the American Philosophical Society*, 133, 2 (1989), 85–111, at 111. Given that most Delaware Valley port arrivals were at the port of Philadelphia, Klepp's figures represent a useful check on the overall trend and accuracy of the figures in the other columns.

[30]See discussion in Appendix I.

[31]The results are presented in Table 8. Table 8 assumes that servants served an average four-year term. Most scholars agree that middle-colony servants rarely served more than four years. Indeed contract lengths clearly dropped well below four years as the century progressed. Grubb, for example, argues that "the length of adult servant contracts plummeted over the second half of the eighteenth century" ("Labor, Markets, and Opportunity," 239). Citing Grubb, Fertig reports contracts as short as two years. (See his "Eighteenth Century Transatlantic Migration," 282.) Wokeck puts contracts for adults in the two–three-year range, but finds that contracts for adolescents were substantially longer in duration. See

Table 7. Servant immigration to the Delaware Valley, 1680–1780 (in round numbers)

Decade ending	British @ 35%[1] and @66%[2]	German @ 35%[3] and @58%[4]	Southern Irish @66%	Northern Irish @25%	Total servant imports
1680	525				525
1690	3850				3850
1700	1050				1050
1710	875				875
1720	1750	350			2100
1730		756	477	74	1307
1740		4367	2196	627	7190
1750		4970	2710	1306	8986
1760		8739	2402	2024	13165
1770	2781	4473	2515	3016	12785
1780	1868	2442	1115	1800	7225

[1] 1670–1720.
[2] 1760–1776.
[3] 1720–1760.
[4] 1760–1776.

Table 8. Delaware Valley servant population, based on immigration estimates, 1680–1780 (in round numbers)

Decade ending	Servant imports	Landed servant population[1]	Servant population after attrition
1680	525	210	180
1690	3850	1540	1319
1700	1050	420	360
1710	875	350	300
1720	2100	840	720
1730	1307	523	448
1740	7190	2876	2465
1750	8986	3594	3080
1760	13165	5266	4512
1770	12785	5114	4382
1780	7225	2890	2476

[1] Column 1 is adjusted to show servant population for any one year within the decade, allowing for persistence through average contract length (no. migrating ÷ 10) (× 4).

Trade in Strangers, 162. The table also applies an attrition rate of 14.3% that has been calculated to reflect an early mortality rate (seasoning) among new migrants reported to be about 1.7 times higher than the general Philadelphia-region mortality rate of 47/1000 (i.e. recent migrants died off at a rate approaching double the creole rate). This calculation reflects an overall survival rate over a four year contract term of almost 80% (i.e. where N_1 is the size of the entry cohort the percentage of survivors (N_2) is calculated as $[N_1 - 8\%)\ (-4.7\%)(-4.7\%)(-4.7\%)]$, which is 79.6%. As explained in the Chesapeake calculation (see Appendix II, "Seasoning and General Mortality in the Chesapeake Region: Estimates and Sources"), the servant population at any one moment is made up of cohorts of initial entrants and survivors subject to two different death rates. On death rates in the Philadelphia region during the 18th century, see Klepp, "Demography in Early Philadelphia," 94, 96, 103–5, Table 2.

Table 9. Servants in the Philadelphia population and workforce (adapted from Salinger estimates, in round numbers)

Decade ending	Servant population[1]	Philadelphia population[2]	Percentage servants in population	Philadelphia workforce[3]	Percentage servants in workforce
1730	285	5808	4.9	3177	9.0
1740	575	8017	7.2	4249	13.5
1750	635	10720	5.9	4996	12.7
1760	1305	13413	9.7	6266	20.8
1770	396	15718	2.5	6438	6.1
(1775)	457	18692	2.4	7526	6.1

[1] Decadal averages derived from Salinger, "*To Serve Well and Faithfully*", Table A3, Columns 3 ("Servant Immigration—Total") and 4 ("Servant Work Force").
[2] Decadal averages derived from data in *ibid.*, Table A3, Column 8 ("Philadelphia Population").
[3] Decadal averages derived from data in *ibid.*, Table A3, Columns 7 ("Total Unfree Work Force") and 9 ("Philadelphia Work Force").[33]

A different estimate may be gleaned from the work of Sharon Salinger.[32] Working from records of servants indentured to Philadelphia masters, Salinger has calculated figures for a servant workforce that can be compared with her figures for population and "work force" for the city as a whole. Presented here as averages for successive decades, these go to indicate that servant numbers never pushed over 10% of the city's population, nor 20% of its workforce, and that even these magnitudes were approached for only a short period, during the 1750s. At all other times during the 18th century the proportions are substantially lower (Table 9). In fact, Salinger's figures for the city population are substantially lower than other recent estimates. To the extent that her figures understate the city population (and hence by extension "work force"), they will overstate the significance of servitude in both measures.[34]

[32]Sharon Salinger, *"To Serve Well and Faithfully": Labor and Indentured Servants in Pennsylvania, 1682–1800* (Cambridge and New York, 1987), 172–84, Tables A.1–A.3.

[33]In producing my figures I have summed Salinger's Columns 7 and 9 to achieve a total Philadelphia workforce estimate. Although Salinger's computation in her Column 10 ("Percentage Unfree Work Force") represents her Column 9 as if it were a "Total Philadelphia Work Force" figure, the results she reports there are not comprehensible unless Columns 7 and 9 are summed. Even then the simple percentages in her Column 10 are still inaccurate (though close) on her own terms. Accordingly I have recomputed all of them in preparing my decadal figures. Where there are data gaps in Salinger's table I have estimated workforce on the basis of the proportion of population in workforce in adjoining periods for which data are available.

For critical commentary on Salinger's quantitative evidence, see Farley Grubb, "Book Review," *Journal of Economic History*, 48 (1988), 772–4. For further debate on the matter, see Sharon Salinger, "Labor, Markets and Opportunity: Indentured Servitude in Early America," *Labor History*, 38 (1997), 311–38, and Grubb's rejoinder, "Labor Markets and Opportunity," in *Labor History*, 39 (1998), 235–41. I should add that the concept of "work force" used here is open to the same objections as were raised earlier to "labor force" in the Chesapeake context. Salinger's data indicate that "total work force" varies from 40 to 54% of population over the period in question (1729–75).

[34]See, for example, Klepp, "Demography in Early Philadelphia," 103–5, Table 2, where the following figures are offered:

Year	Population	Year	Population
1730	7075	1760	18598
1740	10117	1770	26789
1750	13926	1780	32073

Table 10. Estimated Delaware Valley servant population and Pennsylvania European population, 1680–1780 (in thousands)

Decade ending	Estimated servant population	PA White population[1]	Servant (%)
1710	0.300	22.570	1.33
1720	0.720	28.675	2.51
1730	0.448	47.822	0.94
1740	2.465	79.180	3.11
1750	3.080	110.722	2.78
1760	4.512	169.922	2.66
1770	4.382	222.092	1.97
1780	2.476	302.752	0.82

[1] This series is produced from the Pennsylvania population series reported by McCusker and Menard, deflated by 7.5%, which is the average proportion of the African-originating component of population in all middle-colony population, as reported in the same source. See McCusker and Menard, *The Economy of British America*, 203.

We may also note that Salinger's figures suggest that over the same period (1720–75) the city of Philadelphia absorbed approximately 20% of all Delaware Valley servant imports (9500 of 50,000). To the extent that Salinger is correct in arguing that Philadelphia represented a concentration of servant labor, the remainder would have been dispersed so widely through the rural population as to preclude the servant population of non-urban areas approaching even the comparatively modest levels observable in the city.[35]

Using Klepp's population figures while holding constant Salinger's estimates of the varying proportion of population in workforce over time gives the following results:

Decade ending	Servant population	Philadelphia population	Servants in population (%)	Philadelpha workforce	Servants in workforce (%)
1730	285	7075	4.0	3870	7.4
1740	575	10117	5.7	5362	10.7
1750	635	13926	4.6	6490	9.8
1760	1305	18598	7.0	8685	15.0
1770	396	26789	1.5	10984	3.6
(1775)	457	32073	1.4	12925	3.5

[35]On Philadelphia as a center of servant labor, see Salinger, "*To Serve Well and Faithfully*", 7. Grubb observes that Salinger may have greatly overestimated the number of servants retained by Philadelphia masters. See Grubb, "Book Review," 774. If so, this would add another factor overstating the incidence of servitude in the city. Independent evidence suggests, meanwhile, that migrant indentured servants were no more than occasionally in evidence in rural households. The "Town Book" for Goshen (Chester County), 1718–1870 (Vol. 1 *Historical Society of Pennsylvania*) contains a list of servants "Imported into this Province and purchased by the Inhabitants of this Township" spanning the period 1736–72. Sixty servants are listed, bought by 28 different purchasers. The purchasers, however, comprised but one-third of Goshen's farmers. Of purchasers 40% (11 of 28) only ever bought one servant; a further 35% (10 of 28) only ever bought two. One family alone (over two generations) accounted for nearly 30% of all purchases; three families accounted for fully 50%. Servants would thus be encountered routinely only in a small minority of households. For similar conclusions based on independent analysis of the same source, see Barry Levy, *Quakers and the American Family: British Settlement in the Delaware Valley* (New York, 1988), 240.

Table 11. Servants and slaves in Philadelphia population (adapted from Salinger estimates, in round numbers)

Decade ending	Servant population	Slave population[1]	Philadelphia population	Servants in Philadelphia population (%)	Slaves in Philadelphia population (%)	Servant to slave ratio
1730	285	880	5808	4.9	15.2	1:3
1740	575	1209	8017	7.2	15.1	1:2
1750	635	1131	10720	5.9	10.6	1:2
1760	1305	1136	13413	9.7	8.5	1:1
1770	396	1682	15718	2.5	10.7	1:4
(1775)	457	1394	18692	2.4	7.5	1:3

[1] Decadal averages derived from data in Salinger, "*To Serve Well and Faithfully*", Table A3, Column 5 ("Slave Population").

Table 10 assumes that all Delaware Valley imported servants remained in Pennsylvania, but this was very far from being the case; numbers of them traveled to New Jersey, Maryland, Virginia and beyond. On the other hand, Maryland in particular was a site of significant servant importation during the 18th century, numbers of whom may well have entered the Delaware Valley region offsetting those who left.

Comparison of estimated servant population figures with general population figures for Philadelphia and for Pennsylvania thus shows that, even more than in the 17th-century Chesapeake, in the 18th-century Delaware Valley the numerical weight of migrant indentured servitude in defining the social relations of work was very substantially overshadowed by the general rapid growth of population. Certainly the institution was of importance in shaping the performance of work. Just as certainly, the great bulk of work was performed within a much wider range of relations.

As in the Chesapeake, this picture cannot be presumed complete without considering the impact of migrant servitude on the legal culture of work in the context of the bound labor represented by African slavery, so as to establish a measure of the explicitly bound component of the population. According to Mary Schweitzer, slavery "simply was not common" in Pennsylvania, "particularly in the countryside."[36] Sharon Salinger's figures, however, indicate that in Philadelphia slavery had a presence of some significance, outweighing the incidence of migrant servitude both in population and "work force." Servants appear to have outnumbered slaves only once, in the middle of the century, and then only briefly (Table 11).

Unlike the Chesapeake, slaves did not substitute for servants (nor servants for slaves): as Schweitzer points out, "Rather, servants and slaves were used interchangeably throughout the history of the colony, and when unfree labor disappeared it was replaced by free labor."[37] In proportional terms, that replacement appears to have been in progress from quite early on in the 18th century. Considered as a percentage of Pennsylvania population, servants never exceeded 6% at any point during the century, and appear to have been concentrated in Philadelphia. Slaves, like servants, were less common outside Philadelphia than within. In the city together their numbers reached 20% of population in the 1730s, but the trend from that point was steadily downwards.

[36] Mary Schweitzer, *Custom and Contract: Household, Government and the Economy in Colonial Pennsylvania* (New York, 1987), 45.
[37] *Ibid.*, 17.

Table 12. Slaves in Philadelphia workforce (adapted from Salinger estimates, in round numbers)

Decade ending	Slave population	Slave workforce[1]	Philadelphia workforce	Slaves in workforce (%)
1730	880	616	3177	19.4
1740	1209	882	4249	20.8
1750	1131	792	4996	15.9
1760	1136	795	6266	12.7
1770	1682	958	6438	14.9
(1775)	1394	574	7526	07.6

[1] Decadal averages derived from data in Salinger, "*To Serve Well and Faithfully*", Table A3, Column 6 ("Slave Work Force"). Where data are unavailable I have assumed that the slave workforce constituted 70% of the slave population. This figure is consistent with those that Salinger reports through 1757 but may overestimate the slave workforce thereafter.

Workforce estimates tell the same story. Slaves peaked at slightly over 20% of the workforce in the 1730s (Table 12). Although the number of enslaved Africans in Philadelphia continued to increase it did not keep pace with the general expansion of the population. Considered together, slaves and servants constituted about one third of Philadelphia's work force throughout most of the first half of the 18th century, but declined quite rapidly in significance during the third quarter (Table 13).

Flows

If we turn now from numbers to the nature and characteristics of the migrant population, we can probe indentured servitude's social and legal significance from a slightly different angle.

Examining the sociological dimensions and structure of population flows from Britain to North America in the years immediately prior to the 1776 Revolution, Bernard Bailyn has proposed that what took place during those years is best described as a "dual emigration."[38] The migration was dual both in its social character and its regional origins. On one hand, substantial numbers of young unmarried males, traveling alone, migrated from south, central and western England. In the migration from these areas (which Bailyn somewhat misleadingly designates "metropolitan" because it

Table 13. Servants and slaves in Philadelphia population and workforce (adapted from Salinger estimates, in round numbers)

Decade ending	Servant and slave population	Servant and slave workforce	Philadelphia population	Servants and slaves in population (%)	Philadelphia workforce	Servants and slaves in workforce (%)
1730	1165	901	5808	20.0	3177	28.4
1740	1784	1457	8017	22.3	4249	34.3
1750	1766	1427	10720	16.5	4996	28.6
1760	2441	2100	13413	18.2	6266	33.5
1770	2078	1354	15718	13.2	6438	21.0
(1775)	1851	1031	18692	9.9	7526	13.7

[38] Bailyn, *Voyagers to the West*, 126–203.

is centered on final departures from London), Bailyn finds few women, children, or families, and a high incidence of indentured servitude. Simultaneously, Bailyn detects a second, distinct "provincial" migration, centered on northern and western ports and involving flows of migrants from Yorkshire, the north of England and Scotland. Amongst these migrants he finds substantial numbers of women and children, substantial evidence of migration in family groups, and a low incidence of indentured servitude. The ideal-typical metropolitan migrant was "an isolated male artisan in his early twenties, a bondsman for several years of unlimited servitude."[39] Collectively, metropolitan migrants (whether indentured or not) represented a transfer of population whose principal resource was their labor power. The ideal-typical provincial migrant, in contrast, was a family member. Collectively, provincial migrants represented "the transfer of farming families, whose heads were men of some small substance, or at least to some extent economically autonomous."[40] Different people from different places, metropolitan and provincial migrants went to different North American destinations. Metropolitan migrants went to Pennsylvania, Virginia and, overwhelmingly, Maryland, where labor was in demand. Provincial migrants went to North Carolina and New York, and also further north to Nova Scotia, where they might find opportunities for enterprise to furnish relief from the social and economic hardships (but not destitution) that they had left behind. Not a "general milling and thronging of people," Bailyn's emigration was patterned and purposeful: "a work force to the central colonies; a social movement of substantial families to New York, North Carolina, and Nova Scotia."[41]

Bailyn's conclusions are built on intensive analysis of but one short paroxysm of transatlantic European migration, but they reproduce tendencies detectable in the broad sweep of 150 years of prior migrations. As we have seen, these prior movements group roughly, though not exclusively, into two sequences: a 17th-century sequence, in which, starting in the late 1620s, an almost exclusively English migration transfers some 140,000 people to New England (1630–40) and the Chesapeake (1630–1700), with about 15,000 to the Delaware Valley after 1675 and others to the Lower South; and an 18th-century sequence, in which a more varied European migration transfers a further 307,000–350,000 people to a variety of destinations along the Atlantic seaboard from Georgia to New York, most of whom go to New York, Pennsylvania, Maryland and North Carolina. During each of these sequences one can detect precisely the same distinctive "dual" pattern that Bailyn describes. Summarizing, in the 17th century the initial phase of migration, involving some 35,000 between 1625 and 1640, was a dual movement of families and of single young males headed for different destinations. Amongst those going to New England, families formed a decisive majority. In contrast, migration to Virginia was completely dominated by youthful males. After the family migration to New England slowed to a drip in the 1640s, the character of 17th-century emigration to the North American mainland lost its dual quality, becoming until the

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[39] *Ibid.*, 203. Bailyn also finds that the incidence of indentured servitude was especially high amongst those in the "metropolitan" group who were "long-distance" migrants—"unattached young men—artisans and farmworkers, for the most part—hundreds of miles from home, [who] had moved from their places of origin some months or even years before" and since then had engaged in serial migrations within England, the last taking them (like so many others) to London, whence migration into bonded servitude in the colonies was but one more in a sequence of movements, albeit one more extended than those they had already experienced. See 188–89.

[40] *Ibid.*, 203.

[41] *Ibid.*, 228, and generally 204–28. See also Canny, "English Migration," 52.

late 1670s almost exclusively a creature of movement to the Chesapeake, and comprising a movement of some 50,000 people largely single, young and male.[42] This flow to the Chesapeake continued into the 1690s, but after 1675 migration reverted toward the initial dual pattern as a result of the beginnings of a flow of families from the Northwest Midlands into the Delaware Valley. David Hackett Fischer's description of the movement of some 15,000 migrants into the Delaware Valley between 1675 and 1700 (23,000, 1675–1715) indicates that both families and single male servants were participants.[43] As to later 18th-century emigration, studies of migrants entering the port of Philadelphia after 1725 contrast the family-oriented migration originating in Germany and Ulster—by far the two largest groups of migrants—with the continuing youthful, single and male character of flows from England (diminished for most of the period from 1720 until 1760) and Southern Ireland. There are some indications that the incidence of families in German migration declines over the course of the 18th century. On the other hand, Fischer argues that the 18th-century emigration from "North Britain" (Yorkshire, the border counties, Scotland and Ulster) into the Appalachian Back Country was consistently one of families, a point on which Bailyn concurs, as we have seen.[44]

Bailyn's dual migration theory is valuable, because it allows considerable refinement to be introduced into assessments of population structure. At the same time it is deceptive in dividing the emigrant population into "family" (which actually includes relatively intact households) and "labor force" streams, for this suggests that the 17th- and 18th-century colonies were characterized by work relations that assigned exclusive or at least predominant participation in labor to single youthful male migrants temporarily restrained in conditions of bonded servitude. That such persons were involved in legally distinct categories of working is beyond doubt. But they did not represent the sum of the colonies' labor force, nor even its single most important component.[45] The only basis upon which such a claim might be made requires a definition of work and labor that excludes functions integral to proto-industry, domestic and household production and family reproduction performed by women and female children. Given

[42]Horn, *Adapting to a New World*, 30–38, shows that among the approximately 20% of migrants who paid their own way to the Chesapeake, about 75% were under 35 and better than 2 in every 3 were male. Of the males, about 60% were single. The indentured—the bulk of recorded migrants—tended to be substantially younger (75% under 25), and even more heavily male and single.

[43]Fischer suggests that somewhere between 40% and 60% of the Delaware Valley's initial migrants migrated in family groups. *Albion's Seed*, 434. In *Quakers and Politics*, 50, and also in his *The Urban Crucible: Social Change, Political Consciousness and the Origins of the American Revolution* (Cambridge, MA, 1979), 15, Gary Nash suggests that approximately two-thirds of early Delaware Valley migrants (and a bare majority of adult male migrants—51%) arrived free of indenture.

[44]On the character of German and Irish migration, see Wokeck, "German and Irish Immigration to Colonial Philadelphia," and "The Flow and Composition of German Immigration to Philadelphia." On the tendency of German family migration to decline in importance over time relative to the migration of younger single persons, see Wokeck, "Flow and Composition," 266–73, and Grubb, "Immigration and Servitude," 104–5. Both Wokeck and Grubb date the relative decline in family migration to the resumption of emigration flows following the interruption of the Seven Years War (1755–62). Even then, however, German migration remained "relatively family oriented." Comparing German with English migration after the end of the Seven Years War, Grubb finds that "German immigrants had over four times the proportion of dependent movers." See "Immigration and Servitude," 105. On the character of flows into Appalachia, see Fischer, *Albion's Seed*, 610. Fischer's argument for the family character of this migrant flow is based on its 1770s peak when, he reports, 61% of northern English emigrants traveled in family groups, 73% of Scottish, and 91% of Ulster emigrants. See also Bailyn, *Voyagers to the West*, 134–47.

[45]That distinction belongs to enslaved Africans.

the clear evidence of extensive engagement of women and children in agricultural and proto-industrial work in 17th- and 18th-century Europe, given the ubiquity of household relations of production throughout the mainland colonies (the very ubiquity that made "family" migration viable in the first place), it is more sensible to hypothesize that "labor force" and "family" or "household" represented related continua of work relations rather than distinct spheres of work and not-work.[46] This also allows us to consider emigrant workers in the context of creole populations and institutions, rather than separate from them.

To this end, let us consider the characteristics of the "labor force" that emigration brought to the various recipient regions—17th and 18th century both—in more detail.

New England. Between 1629 and the early 1640s some 21,000 people emigrated from England to Massachusetts Bay. After 1640 migration tailed off sharply; by 1645 it had shrunk to an average of only a few hundred per decade.[47] Commonly identified as a religiously motivated exodus of Puritans intending "to build a new Zion in America,"[48] this "Great Migration" drew a plurality (38%) of its participants from the puritan fastness of East Anglia (Norfolk, Suffolk and Essex) and Kent, who traveled in cohesive groups of families with few unattached single males.[49] A further one-third of the migrants came from London and the remaining Home Countries (17%) and the south-west (16%), with the rest a scattering from

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[46]See, variously, Maxine Berg, "Women's Work, Mechanisation and the Early Phases of Industrialisation in England," in Joyce, ed., *The Historical Meanings of Work*, 64–98; David Levine, "Production, Reproduction, and the Proletarian Family in England, 1500–1851," in David Levine, ed., *Proletarianization and Family History* (Orlando, FL, 1984), 87–127; R.E. Pahl, *Divisions of Labor* (Oxford, 1984), 17–62; Keith Snell, *Annals of the Labouring Poor: Social Change and Agrarian England, 1660–1900* (Cambridge, 1985), 270–373; Laurel Thatcher Ulrich, *Good Wives: Image and Reality in the Lives of Women in Northern New England, 1650–1750* (New York, 1982), 13–50; and "Martha Ballard and her Girls: Women's Work in Eighteenth-Century Maine," in Stephen Innes, ed., *Work and Labor in Early America* (Chapel Hill, 1988), 70–105; Christopher Clark, "Social Structure and Manufacturing before the Factory: Rural New England, 1750–1850," in Safley and Rosenband, eds., *The Workplace before the Factory*, 11–36, particularly 19–23; Eric Nellis, "The Working Lives of the Rural Middle Class in Provincial Massachusetts," *Labor History*, 36 (1995), 505–29; Main, "Gender, Work, and Wages," 39–66; Jensen, *Loosening the Bonds*, particularly 36–113; Mary Ann Mason, *From Father's Property to Children's Rights: The History of Child Custody in the United States* (New York, 1994), 1–47; Schweitzer, *Custom and Contract*, 34–5; Kulikoff, *Agrarian Origins*, 24–33; Boydston, *Home and Work*, 1–29; Vickers, *Farmers and Fishermen*, 60–77. Recognizing the household as a site of working—productive and reproductive—relations does not entail embrace of the simple model of "capitalist transformation" in which capitalism brings about the modern idea of work with its gendered division of labor by separating work from home, market from community, public from private. It is clear, as Berg writes, that "workplace organisation, techniques of production and their community [and household] context" have always incorporated forms of gender and age division that impact upon the meaning of work, rendering the "organic" pre-industrial "household economy" a myth (64,89). On this, see also Chris Tilly and Charles Tilly, *Work Under Capitalism* (Boulder, CO, 1998). But the observation does not affect the point being made here—that the household (however organized) is a site of work. Hence, to include only youthful males in one's description of an 18th century migratory labor force is misleading.

[47]Robert P. Thomas and Terry L. Anderson, "White Population, Labor Force and Extensive Growth of the New England Economy in the Seventeenth Century," *Journal of Economic History*, 33 (1973), 641–42.

[48]Fischer, *Albion's Seed*, 18.

[49]Thomson, *Mobility and Migration*, 14; Archer, "New England Mosaic," 483. Compare Fischer, *Albion's Seed*, 16–17, 31–36. See also David Hackett Fischer, "*Albion* and the Critics: Further Evidence and Reflection," part of "*Albion's Seed: Four British Folkways in America*—A Symposium," *William and Mary Quarterly*, 3rd ser., 47 (1991), 260–308, at 264–74.

virtually every region of England.[50] Among those from outside East Anglia, the proportion of young unattached males was much higher. In all, approximately 60% of the migrants through 1650 were below age 24, about half of whom (or roughly one-third of the original settler population) were single unattached males.[51] Although few of these emigrants can be identified explicitly as servants it has been suggested that up to 25% of the emigrant population might have been destined for service on reaching New England,[52] which in turn suggests that the servant population would have fallen below 15% of the total by the end of the Great Migration.[53] With immigration's decline thereafter, the migrant servant population would have dwindled very rapidly indeed, exacerbating major labor shortages.[54]

As elsewhere in areas of mainland settlement, the surplus of single males among the original settlers meant delayed marriage for men and early marriage for women. The latter, in combination with high fertility rates, meant a higher rate of childbearing than in England, which kept the overall population youthful. Unlike elsewhere, the healthy environment and relatively even distribution of wealth promoted family stability, personal longevity and large families. As sex ratios stabilized with the maturing of the first creole generation, age at marriage began to drop, at first among both men and women, later among men only, leading to a reduction in age span at marriage. The demographic effects of these changes could only enhance the trends already in place. Throughout the remainder of the 17th century—indeed, throughout the colonial

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[50]Archer, "New England Mosaic," 483.

[51]*Ibid.*, 479, 481. See also Cressy, *Coming Over*, 52–63. Fischer faults Archer's study for inaccurate age and sex ratios, preferring those of Virginia DeJohn Anderson ("*Albion* and the Critics," 268), but in fact the difference in age ratios is slight. The difference in gender ratios is more substantial, although not wildly so. Archer argues that 60–67% of the migrants were males ("New England Mosaic," 480,482), Anderson finds a more precise 56.8% of migrants to have been male. See Anderson, *New England's Generation: The Great Migration and the Formation of Society and Culture in the Seventeenth Century* (New York and Cambridge, 1991), 222, 223.

Both Thompson and Archer report a very low ratio of servants in total migrants among those migrating from Greater East Anglia. Of those East Anglians that could be determined to be servants, Thompson shows most were adolescents or younger: 66% of servants of identifiable age were under 20 (75% of the males and 60% of the females). The youngest was 7. Thompson also shows that these servants were by-and-large "living in the households of their masters and mistresses," came from the same local area as the host household, and migrated as part of the household. This East Anglian "servant parochialism" contrasts with the substantially greater numbers and much greater mobility of the non-East Anglian young males in the migration, who were largely unattached. See, generally, Thompson, *Mobility and Migration*, 114–25; Archer, "New England Mosaic," 486–88.

[52]Cressy, *Coming Over*, 53.

[53]Assuming an incidence of 25% of servants in total migration, an average four-year term, a total population of 13,500 in 1640, a death rate of 22/1000, and no abnormal early mortality attributable to "seasoning," the servant population that results is approximately 1990, or 14.75%. On population, see McCusker and Menard, *Economy of British America*, 103. On mortality see Thomas and Anderson, "White Population," 647. As we have seen, however (above, n. 8), Cressy is the only scholar to propose an incidence of servants in total migration as high as 25%, the preponderance of opinion being in the area of 16–17%. At an incidence of 16.5%, but holding all other assumptions stable, the servant population by 1640 would have been slightly in excess of 1300, or 9.7%.

[54]References to the scarcity of labor in New England are rife in local records, virtually from the beginning of settlement. They become more pronounced during the 1640s. See, for example, Vickers, *Farmers and Fishermen*, 45–64; Thompson, *Mobility and Migration*, 230; Innes, *Creating the Commonwealth*, 101–5.

period—"New Englanders had low infant mortality, large families, and long lives."[55] Hence "the population grew without the need for new colonists or an imported labor force."[56] Already by the early 1650s the achievement of self-sustaining population growth had established local natural increase as the principal source of labor to replace the first generation, and underlined family-centered households as the principal institutional structure through which work would be organized and workers procured. Near-universal participation in marriage and family-formation confirmed the pattern.

Labor supply and labor control hence followed a generational dynamic. Age became a crucial line demarcating the legal difference between master and servant.[57] This of itself did not distinguish the performance of work in New England from performance in other areas of colonial settlement, nor indeed from work in Britain.[58] In all areas of British mainland settlement, servitude and youth were closely associated (at least among Europeans). In New England, however, the absence of any necessity to continue renewing the region's labor supply through influxes of *unattached* young male emigrants (indentured servants), and the ability to rely instead on local sources—one's own family, local adolescents[59]—gave work a distinctive character when compared, say, to the 17th-century Chesapeake.[60]

The Chesapeake. Organized emigration to the Chesapeake began in 1607 with the founding of Jamestown and continued erratically through the 1620s, then strengthened

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[55]Archer, "New England Mosaic," 499, 486, 488–92, 494–95. See also Robert V. Wells, "The Population of England's Colonies in America: Old English or New Americans," *Population Studies*, 46 (1992), 85–102, at 90–99; Daniel Scott Smith, "American Family and Demographic Patterns and the Northwest European Model," *Continuity and Change*, 8 (1993), 395–96; Potter, "Demographic Development and Family Structure," in Pole and Green, eds., *Colonial British America*, 139–41.

[56]Archer, "New England Mosaic," 499.

[57]Vickers, *Farmers and Fishermen*, 52–77; Tomlins, *Law, Labor and Ideology*, 244–7. See generally, Philip J. Greven, Jr., *Four Generations: Population, Land and Family in Colonial Andover, Massachusetts* (Ithaca, 1970).

[58]On the close identity of youth and servitude in Britain, see Paul Griffiths, *Youth and Authority: Formative Experiences in England, 1560–1640* (Oxford, 1996), particularly 290–350; Ann Kussmaul, *Servants in Husbandry in Early Modern England* (New York and Cambridge, 1981); M.F. Roberts, "Wages and Wage-earners in England, 1563–1725: The Evidence of the Wage Assessments" (D.Phil., Oxford University, 1981), 133–63. See also D.C. Coleman, "Labour in the English Economy of the Seventeenth Century," *Economic History Review*, ser. 2, 8 (1956), 284–6; Keith Thomas, "Age and Authority in Early Modern England," *Proceedings of the British Academy*, 62 (1976), 205–48.

[59]Vickers, *Farmers and Fishermen*, 52–77. See also Main, "Gender, Work and Wages," 56–7.

[60]During the 1620s, as David Cressy shows, New England's original projectors had conceived of the colony as a commercial plantation; not "a place for a man with a wife and small children" but "a company-controlled settlement" like the Chesapeake, "manned by indentured workmen." Even when family settlement began to be mooted, the model remained one of labor supply replenished by constant migration, for " 'youths and girls … must be continually drawn over to supply the rooms of men-servants and maid-servants, which will marry away daily and leave their masters destitute' " (interestingly, the statement carries the clear implication that these men- and maid-servants could not be restrained from marrying, or retained in service after marriage). After 1630, however, "the emphasis shifted firmly in favour of a residential and agricultural settlement, peopled by free migrants and their families." See Cressy, *Coming Over*, 44–45 and generally 54–68. We have already noted that bound labor hardly featured in migration to New England. Nor did it have any significant incidence in the resident settler population (Vickers, *Farmers and Fishermen*, 56–7, nn. 51,52). Winifred Rothenberg speculates that "an agricultural labor force, unconstrained and free to move, may well be a New England innovation." See Winifred Barr Rothenberg, *From Market-Places to a Market Economy: The Transformation of Rural Massachusetts, 1750–1850*. (Chicago, 1992), 181, 182–3. Seventeenth-century evidence suggests that the institutional conditions of that innovation were established early.

substantially in the decades after 1630. Emigration was peaking by the late 1660s/early 1670s, but continued strong until the last years of the century when flows were disrupted by 20 years of European warfare between 1688 and 1713.[61] Taking a broad focus, Chesapeake migrants came from roughly the same general areas as the majority of those to New England: that is to say, at first mostly from the south-east—London, the Home Counties, Kent and Essex; later from south-west England, South Wales and the West Midlands, through Bristol, and the north, through Liverpool.[62] As in the case of migration to New England in the 1630s, London in fact served both as a regional center and as a magnet that drew eventual transatlantic emigrants (both intending and unintending) from all over the country.[63] Bristol's hinterland was more concentrated. The very substantial East Anglian influence that imprinted a lasting familial character on the Great Migration to Massachusetts Bay was, however, absent from the Chesapeake migration. Family migration to the Chesapeake was a far more restricted phenomenon, one that appears to have been associated largely with elites.[64]

As in New England's case, Chesapeake migrants were strikingly young. Unlike New England, however, single males were predominant among migrants (the male:female ratio among indentured migrants varying from an extreme of 6:1 in the 1630s to 3:1–2:1 during the second half of the century[65]). Male predominance was also a characteristic of the *c.* 15–25% of migrants who paid their own way, although less pronouncedly so (approximately 2.4:1) than among the indentured. Self-supporting migrants tended to be single, like the indentured, but on average somewhat older, three-quarters of them falling below age 35 but most in the 20–34 age range. Indentured migrants in contrast were substantially more youthful, numbering consistently around 30% younger than age 19 and 80% younger than 24.[66] Indeed, there are

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[61] On the earliest decades see, generally, Morgan, *American Slavery, American Freedom*, 71–130; Virginia Bernhard, " 'Men, Women and Children' at Jamestown: Population and Gender in Early Virginia, 1607–1610," *Journal of Southern History*, 58 (1992), 599–618. On later migration, see Menard, "British Migration to the Chesapeake Colonies," in Carr *et al.*, eds., *Colonial Chesapeake Society*. Horn argues that the peak period of British migration was 1630–60, while Menard's figures suggest the peak period was somewhat later, from 1650 to 1680. There is no disagreement, however, that substantial in-migration was a constant feature of the Chesapeake throughout the period 1630–80, and the overlap would suggest that the decades either side of mid-century constituted a period of particularly substantial movement. Horn, *Adapting to a New World*, 24–5. On the abridgment of European migration at the end of the 17th century see Menard "From Servants to Slaves," 355–90; Grubb and Stitt, "Liverpool Emigrant Servant Trade," 1–31.

[62] Horn, *Adapting to a New World*, 39–48.

[63] On migration to London and eventual transatlantic migration from London, see James P. Horn, "Servant Emigration to the Chesapeake in the Seventeenth Century," in Thad W. Tate and David L. Ammerman, eds., *The Chesapeake in the Seventeenth Century: Essays on Anglo-American Society* (Chapel Hill, 1979), 51–95, at 70–74. On the pull of London and migration patterns in general in 16th- and 17th-century England, see Peter Clark and David Souden, "Introduction," in Clark and Souden, eds., *Migration and Society in Early Modern England* (Totowa, New Jersey, 1987), 11–48.

[64] Fischer, *Albion's Seed*, 212–46; Horn, *Adapting to a New World*, 19–77; Horn, "Servant Emigration to the Chesapeake," 51–95. Horn and Fischer debate the interpretation of regional migration patterns in James Horn, "Cavalier Culture? The Social Development of Colonial Virginia," and Fischer, "*Albion* and the Critics," both in "*Albion's Seed*—A Symposium," 238–45 and 277–89.

[65] Horn, *Adapting to a New World*, 37.

[66] *Ibid.*, 30–1, 35–6. Thomas observes that of 5000 migrants leaving for American Plantations in the year 1635, well over half were below age 24 (commonly regarded in the 17th century as the age of transition to male adulthood), some being unattached children of age 10–11. See Thomas, "Age and Authority," 216. Horn supplies more precise details (see table below) comparing several points throughout the century, based on registrations of indentured migrants recorded at point of departure (*Adapting*, 36).

excellent grounds for supposing that in fact the servant migration was substantially more youthful than even these figures would indicate. Servants consisted of two streams of persons: those who had committed to terms of service before departure and who were registered as such, and those who had not. The latter arrived in the Chesapeake colonies without indentures, where they would serve according to terms and conditions specified locally and embodied in local statute law. The characteristics of such servants can be inferred only from the records of local Chesapeake courts before which they were brought to have their ages, and thus their appropriate term of service, determined. No comprehensive survey of those records has been undertaken with this specific issue in mind, but every piecemeal investigation of them has determined that those who arrived without indentures and who were retained according to "the custom of the country" were consistently younger than those who entered indentures in England. Those investigations support the conclusion that throughout the 17th century the majority of male servant migrants clustered at the lower rather than the upper end of the age range (15–24), and thus require us to adjust the lower bound of that "typical" range substantially downwards. On this evidence, male servant migrants on the whole are far more appropriately considered typically boys and youths than young adults.[67]

As we have seen, unlike New England the Chesapeake colonies imported no substantial number of formed families. Nor did the region provide an environment particularly conducive to local family formation among single emigrants. A far less benign disease environment routinely claimed a significant proportion of the entering population through "seasoning." Those who survived their initial years in the region enjoyed much shorter life expectancy than their fellows to the North. Indentured servitude delayed entry into marriage for both men and women, and the male-biased sex ratios in the migrant population greatly hindered the extent of family formation, while foreshortened life expectancy for parents limited the size of the families that could be produced. More disease and greater maldistributions of wealth and resources than in New England dampened fertility. All told, the Chesapeake population was not self-sustaining until late in the 17th century.[68]

Yet throughout the century, reliance on immigration to maintain and increase population declined, at least in relative terms. That is, although until late in the century its rate was not sufficient to replace population lost through death and out-migration, local reproduction took place from the beginning.[69] Moreover, until the last quarter of

Age	1635 London servants		1682–86 London servants		1697–1707 Liverpool servants	
	Males (%)	Females (%)	Males (%)	Females (%)	Males (%)	Females (%)
0–15	3.8	3.0	6.5	1.9	23.0	4.2
15–19	27.4	30.0	21.0	25.8	32.0	30.6
20–24	39.9	48.1	51.0	57.2	26.8	46.5

[67]This matter is discussed at greater length in Appendix IV, "Servants' Ages."

[68]Horn, *Adapting to a New World*, 136–9; Anderson and Thomas, "The Growth of Population and Labor Force," 295–305, esp. 303; Carr, "Emigration and the Standard of Living," 271–87; Russell R. Menard, "Immigrants and their Increase: The Process of Population Growth in Early Colonial Maryland," in Land *et al.*, eds., *Law, Society and Politics in Early Maryland*, 88–110.

[69]Carr, "Emigration and the Standard of Living," 273.

the century, indentured servants completing their terms continued to have opportunities to acquire or at least rent land and enter into independent production that they could not enjoy in England.[70] Families were formed, children were born, and a creole population base was established, one that displayed significant improvements in its demographic history in comparison with its migrant parents and neighbors. Creoles "married sooner and lived a little longer, thus acquiring time to have more children." Creoles enjoyed higher rates of reproductive increase than their parents and their longer life spans "prolonged stable family life," giving their own children a chance to grow to maturity unimpeded by early parental death.[71]

The social effects of this are obvious. Immigration meant a constant supply of new youthful labor, but increasingly migrant servants became part of, rather than the main component in, a local population. By the 1660s, according to James Horn, the population was divided more or less into two roughly equal segments, those he nominates as "dependents"—that is "servants, slaves, and recently freed men and women"—and the white creole population, mostly (*c.* 40%) "small and middling planters, including tenant farmers, who used their own family labor to work their holding or who possessed a few servants," the rest (*c.* 10%) "wealthy planters, merchants, gentry, and a small group of artisans."[72]

The distribution of servants at this time (the third quarter of the 17th century) further reinforces an image of a society not starkly divided between a free and a bound population. Accumulations of land in large units and aggregations of servile gang labor were the exception. Most plantations were small and substantial numbers of them had no bound labor present at all. Most servants were scattered among small plantations rather than concentrated on large units. Most plantation masters worked their fields alongside servants, where the latter were present, together with available family members and/or hired hands.[73] Indeed, to the extent that immigrant servants were substi-

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[70] *Ibid.*, 282–6. Horn, *Adapting to a New World*, 151–59, argues for a much more constrained range of opportunity, particularly in Virginia and particularly after 1670. Yet even on the tougher terms he sets, migrants—if they could survive—do not seem to have disadvantaged themselves by their migration. Acquisition of land, though not easy, was easier than in England. Poverty, though in evidence, was not the poverty of malnutrition or underemployment—"most able-bodied workers [could] feed and clothe themselves adequately"—rather it was a poverty marked by inability to improve one's lot *beyond* subsistence. Without exaggerating opportunity's extent, particularly during the last quarter of the century when increasing out-migration testified to the region's growing economic difficulties, the region, according to Horn, "provided opportunities for poor immigrants ... to earn a modest livelihood and perhaps move a few rungs up the social ladder." 159. Or again later, "there was the possibility, if they lived long enough, of forming their own households on their own land, which was more than England offered them." Given a choice, "it is unlikely that many would have chosen to return home." 292.

[71] Carr, "Emigration and the Standard of Living," 273. See, generally, Lois Green Carr and Lorena S. Walsh, "The Standard of Living in the Colonial Chesapeake," in "Forum: Toward a History of the Standard of Living in British North America," *William and Mary Quarterly*, 3rd ser., 45 (1988), 135–59.

[72] Horn, *Adapting to a New World*, 160. My own estimates (assuming that five years is a reasonable demarcation of "recently freed") suggest that the "dependent" segment of the population was closer to one-third than one-half, and that this segment was itself divided 60–40 between bound workers (about two-thirds of whom would be immigrant Europeans) and the recently released. It is not clear that all the recently released should be classified as dependents, although many clearly were.

[73] Lois Green Carr and Lorena S. Walsh, "Economic Diversification and Labor Organization in the Chesapeake, 1650–1820," in Stephen Innes, ed., *Work and Labor in Early America* (Chapel Hill, 1988), 144–88, at 153, 148–57. Horn, *Adapting to a New World*, 281–3.

tutes for the widespread family labor that had failed to materialize through constraints on reproduction, one might say that immigrant servitude in the Chesapeake sustained a local society that shared certain working characteristics in common with New England. In both the central unit of production was the single family household; in both, the young supplied most of the dependent labor. It was the institutional-relational form that youthful dependency took that differed, not the fact of it.

Notwithstanding the absence of any particular scale economies in the Chesapeake's characteristic tobacco/corn culture, however, historians have found "a steady upward drift in mean plantation size" after the mid-17th century, as a minority of established planters added to their holdings. This required considerable initial investment in land and labor rather than incremental addition to existing holdings, and proved a barrier to poorer planters (and also a point of departure in the comparison with New England). At the same time, concentrations of landholding meant that recently freed immigrant servants faced real deterioration in their chances eventually to acquire land. Both developments—the drive to expand production and to improve the rate of return, and the deterioration of opportunity for freed servants—were accentuated in their effects by poor tobacco prices, which placed a premium on the possession of capital in order to adapt successfully to the effects of deteriorating price while simultaneously making capital prohibitively difficult to acquire from scratch.[74]

The result was increasing stratification within creole society and the simultaneous disappearance of opportunity for freedmen, leading to rates of out-migration that had reached "epidemic" proportions by the 1690s.[75] Meanwhile, immigration rates from England, which had remained high for two decades, went into quite rapid decline as 25 years of protracted European warfare (The War of the League of Augsburg/King William's War [1688–1697] and The War of the Spanish Succession/Queen Anne's War [1702–1713] comprehensively disrupted what had already become, by the first half of the 1680s, a dwindling supply of young servants. Under these circumstances, Chesapeake planters turned—reluctantly[76]—to expand greatly their resort to slavery, a development that *inter alia* cemented the relative advantages of wealth in plantation production.[77]

Servant immigrants continued to enter the region, particularly Maryland, but their presence in the labor force—whether as servants or freedmen—was wholly overshadowed by the addition (and natural increase) of a second creole population to work for the first one. Henceforth, slavery would provide the most significant keys to understanding the dynamics of work relations in the Chesapeake, not only between whites and blacks, but also amongst whites.[78]

The Middle Colonies. As we have seen, 17th-century British emigrants both to New England and the Chesapeake came largely from southern and western England—from London and the south-east, and from Bristol and the south-west. Toward the end of

[74]Russell R. Menard, "From Servant to Freeholder: Status Mobility and Property Accumulation in Seventeenth Century Maryland," *William and Mary Quarterly*, 3rd ser., 30 (1973), 37–64, at 57–9, 60; Walsh, "Servitude and Opportunity," 127.

[75]Carr and Menard, "Immigration and Opportunity," 236, 230–40.

[76]Menard, "From Servants to Slaves," 373–74; Grubb and Stitt, "The Liverpool Emigrant Servant Trade," 5–7.

[77]Menard, "From Servants to Slaves," 385–88; Allan Kulikoff, *Tobacco and Slaves: The Development of Southern Cultures in the Chesapeake, 1680–1800* (Chapel Hill, 1986), 38.

[78]The classic account of this dynamic is Edmund Morgan's. See his *American Slavery, American Freedom*, 295–387.

the 17th-century, however, as movement from these areas slowed, there is evidence of increased emigration from the Midlands and the north of England—at first from the north Midlands (Cheshire, Nottinghamshire, Derbyshire) and the Pennine counties (Lancashire and Yorkshire), but increasingly supplemented by movement from the border counties (Cumberland and Westmoreland)—from Scotland and from Ulster. Some of these emigrants had already begun to find their way to the North American mainland via London and Bristol—both ports, London in particular, functioned as staging-areas for long-distance internal migrants from outside the south and west—but by 1680 Liverpool was supplying a rival, more convenient, point of embarkation.[79]

Many of the earliest of the North British emigrants continued to land in the Chesapeake.[80] Beginning in the 1680s and into the early 18th century, however, substantial numbers headed for the Delaware Valley, north of Maryland, a region already thinly settled by a scattering of European migrants.[81] After the end of Queen Anne's War, in 1713, this movement accelerated and widened to encompass the first non-British mass emigrant movement, of ethnic Germans from the southern Rhineland (south-west Germany and Switzerland).[82] With interruptions, these migrant streams first supplemented and then outpaced the continuing movement of mostly British emigrants into the Chesapeake. Concentrating at first on the Delaware Valley, they subsequently combined with intercolonial migration out of the Chesapeake to push into North Carolina and the Appalachian Back Country.

Although spread over a longer period (1675–1715),[83] in four respects the first phase of British migration into the Delaware Valley resembled the Great Migration to New England a half-century before. First, and least important, approximately the same number of people were involved in each movement. Second, both movements had a strong ideological and institutional spine supplied by sectarian religious commonalities: in New England's case puritan Protestantism; in the Delaware Valley, Quakerism. Third, and related to the second, each movement had a strong regional core: East Anglia in the case of New England, the Trans-Pennine north and north Midlands in the case of the Delaware Valley.[84] Fourth, again related, each movement had a pronounced "family" character: approximately 50% of the migrants arriving during the first half of the 1680s traveled in family groups.[85]

Research into the precise demographic breakdown of this initial emigration—its age structure, for example, or the proportion of young single males in the total migrant flow—has not been undertaken to an extent comparable to that on the earlier 17th century movements. The known familial imprint on the early Delaware Valley migrant

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[79]See Horn, *Adapting to a New World*, 43, 39–41.

[80]Grubb and Stitt, "The Liverpool Emigrant Servant Trade," 10–14.

[81]Fischer, *Albion's Seed*, 420–24, 445–51.

[82]By mid-century, Germans represented the largest single ethnic group in the Pennsylvania region, at some 42% of population. Settlers of English and Welsh origin accounted for approximately 28%, as did Ulster and Southern Irish. See Fischer, *Albion's Seed*, 431, n. 7. On German migration, see, generally, Roeber, *Palatines, Liberty and Property*, 27–61; Grubb, "Immigration and Servitude," 1–12; Aaron Fogleman, *Hopeful Journeys: German Immigration, Settlement, and Political Culture in Colonial America, 1717–1775* (Philadelphia, 1996).

[83]One should assume, however, that after 1688 the wartime interruptions already discussed in the context of Chesapeake migration also caused lengthy pauses in the flow of North British emigrants into the Delaware Valley.

[84]It is worth noting that the Delaware Valley's principal 18th-century migrant group (ethnic Germans) also shared a common regional point of origin and common regional culture, as Fogleman, in particular, makes clear. See his *Hopeful Journeys*, 15–65.

[85]Fischer, *Albion's Seed*, 434.

stream, however, attests to the likelihood of an emigrant population somewhat younger than the generality of the contemporary English population, and thus suggests its age profile is likely to be similar to earlier and contemporary 17th-century migrations. It is also known that these earliest emigrants to the Delaware Valley included numbers of servants in their ranks. As Fischer puts it: "The Quaker founders of Pennsylvania showed no hostility to servants, such as had existed among the leaders of Massachusetts Bay. As a consequence, people too poor to pay their own way came in larger numbers to the Delaware than to New England."[86]

While greater than in the earlier migration to New England, it is unlikely that the incidence of servants in the Delaware migration came anywhere close to the continuing contemporary movement into the late 17th-century Chesapeake.[87] Nevertheless, it is likely to have been similar in at least two respects. First, migrants traveling apart from family groups were much more likely to be male than female. Second, they were also likely to be young—adolescents rather than adults. Both characteristics are illustrated in local Delaware Valley records. These suggest that as in the contemporary Chesapeake migration a substantial proportion of imported servants were boys in early-mid-adolescence.[88] Servants traveling in association with family groups were also far more likely than not to be children rather than adults.[89] Service and youth were thus as closely related in the early Delaware Valley as elsewhere on the North American mainland.

After 1715 the origins of Delaware Valley migrants began to change quite markedly as emigrants from the Palatinate and from Ulster became prominent in the migrant stream. The sociological characteristics of emigrants, however, remained relatively constant, replicating much of what we have already seen in earlier movements. Thus, both the German and the Ulster (although not the Southern Irish) migrant streams had a substantial family composition with considerable numbers of dependent children. Among the Germans, the numbers of independent single males migrating tended to rise over time, but without major impact on the age structure of the migrant stream. Given that almost 44% of adult male migrants and 37.5% of female had recorded ages in the range 16–25, and that they were accompanied by large numbers of dependent children, one may be certain that a substantial majority (at least 60%) of ethnic-German migrants were below age 25 and that a near majority (at least 47%) were below the age

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[86] *Ibid.*, 437.

[87] Gary Nash suggests that approximately 35% of all early settlers were indentured, and 50% of adult males. See his *Quakers and Politics*, 279. David Galenson concludes that, although Pennsylvania began appearing as a recorded destination for indentured servants in the 1680s, it did not become a major importer of servants until the 18th century. See Galenson, *White Servitude in Colonial America*, 85.

[88] In the eight years following October 1693, for example, 83 persons imported without indenture who had pledged to serve local masters were brought before the Chester County Court of Quarter Sessions to have terms of service set in "custom of country" hearings. Of these, three were adults and the remaining 80 minors. The average age of the minors (as judged) was 13 yrs 2 months. Of the 80, 67 were boys (average age 13) and 13 were girls (average age $13\frac{1}{2}$), a ratio of 5:1. See Chester County, Pennsylvania, *Docket and Proceedings of the County Court*, vol. 1–2 (1681–97), transcribed as *Records of the Courts of Chester County, Pennsylvania*, 2 vols. Galenson reports a similar male: female ratio of 5:1 among servants destined for Pennsylvania in the 1680s and 1690s. See Galenson, *White Servitude in Colonial America*, 84–5.

[89] According to Gary Nash, "many of the servants were actually nephews, nieces, cousins and children of friends of emigrating Englishmen, who paid their passage in return for their labor once in America." *The Urban Crucible*, 15. Barry Levy similarly observes that the servants who accompanied Quaker settlers were "often the children of neighbors in England." See his *Quakers and the American Family*, 138. Levy suggests that Quaker migrants confronted by the laborious demands of colonizing the Delaware Valley supplemented the labor of their own children and accompanying child servants by also taking unaccompanied "strangers" into their households as laborers. But as we have just seen (see above n. 88)—and as was the case throughout the 17th-century mainland colonies—these "strangers" were as likely as not to be children too.

of 20.[90] Although over the course of the 18th century the composition of the migrant stream became relatively less family oriented, there was little change in age distribution. Consequently, one may conclude that the migration stream, and the labor it supplied, retained its predominantly youthful character.[91]

Sooner than in the Chesapeake, migration—though it continued to be substantial—became a secondary and subsiding factor in Delaware Valley population growth. From the beginnings of the period of sustained in-migration in the early 1680s, rates of population growth consistently exceeded both New England and the Chesapeake.[92] Fertility rates across the region were high, reflecting the youthfulness of the population, reported early marriage ages for women, and the comparatively healthy environment. Birth rates were initially retarded by the early male–female gender imbalance, which capped family formation, and by servitude's imposition of a delay of entry into marriage, mostly affecting men. But a regional population growing by natural increase rather than by immigration was in place by the early 18th century.[93] The young family orientation of the German migrant stream could only further the process.[94] By the 1720s, even Philadelphia—described as a "demographic disaster" during its early years—was moving toward self-sustaining growth.[95]

Immigration continued to be an important source of bound labor. Overall, about 40% of all voluntary migrants entering the Delaware Valley after 1720 underwent a period of servitude.[96] Yet the rapid growth of a creole population underscores that, as elsewhere, immigrants were not the principal source of Delaware Valley labor but rather one of a number of sources. As elsewhere, bound immigrant labor substituted for shortages of family labor in the households—rural and urban—that, in the Delaware Valley as elsewhere, constituted the key units of production. Available records of labor contracting suggest that over time, service *per se* became increasingly an urban phenomenon, suggesting a tendency for the servant population to become concentrated in Philadelphia and other regional centers. Initially, however, servants were as likely to be

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[90]Let us take the period 1730–38 as an example. During these years, 10,670 Germans are recorded as taking passage for Philadelphia. Of these 3997 were men over 16 and the remainder women and children. The latter group appears to break down at approximately 1.176 children per woman, suggesting that there were 3607 children and 3066 women amongst these recorded migrants. Given that 44% of the men, 37.6% of the women and all of the children were 25 or younger we can conclude that 61% of the migrant stream was below that age. Given that 19% of the men, 20.3% of the women and all the children were 20 or younger we can conclude that 47% of the migrant stream was below that age. These estimates are calculated from figures supplied in Wokeck, "German Immigration to Philadelphia," 260, adjusted for age and social composition by the estimates presented in Grubb, "German Immigration to Pennsylvania," 421, 427. (N.B. There is a slight variance between Wokeck's round numbers of males and dependents in the migrant stream and Grubb's percentage figures. I have used Wokeck's round number as the best estimate for males and distributed the remainder according to the ratio of women to children suggested by Grubb's percentages. The variation in outcome is not large.)

[91]Grubb, "German Immigration," 427.

[92]Russell R. Menard, "Was There a 'Middle Colonies Demographic Regime'?" *Proceedings of the American Philosophical Society*, 133 (1989), 215–18, at 216.

[93]Susan E. Klepp, "Fragmented Knowledge: Questions in Regional Demographic History," *Proceedings of the American Philosophical Society*, 133 (1989), 223–33.

[94]Grubb, "German Immigration," 435–36.

[95]Klepp, "Demography in Early Philadelphia," 92, 91–96. As Klepp shows, Philadelphia did not enjoy a sustained positive rate of natural increase until mid-century, when death rates began to fall consistently. By the 1720s, however, birth rates had risen to the point where they at least offset high death rates.

[96]In the period 1720–1770, the incidence of servants in overall migration appears to vary narrowly around 40% between 1720 and 1750 and around 46% between 1760 and 1775, with an intervening fall to about 36% in the 1750s. These figures reflect the varying incidence of servitude among different ethnic migrant groups. For a detailed breakdown, see above Tables 6 and 7 and Appendix I.

occupied in rural and agricultural pursuits as urban. More to the point, however, in no area did their percentage incidence in population exceed single digits.[97]

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The objective in this account has been to place the flow of immigrant labor to the North American mainland in an overall context of population in an attempt to assess the empirical significance of immigration—and particularly of indentured servitude—in early American labor force composition. As I stated at the outset, historians have cited a transition to a predominantly free workforce in the early republic from a colonial-era workforce predominantly unfree, debased, and continuously refreshed in that character by successive waves of bound migrants, as a major vindication of the reality of Revolutionary era egalitarianism, a cultural achievement of historic proportions that "alter[ed] the outlook for 'freedom' for most Americans."[98] Here it has been proposed that migrant indentured servitude, though indeed an important source of colonial era labor power, was both numerically and culturally less important than historians have assumed.[99] The trends of the late 18th and early 19th century, this suggests in turn, were less momentous, more ambiguous, and certainly far less linear in their illustration of "freedom" than liberal historiography supposes.

To assess properly the significance of these propositions, it is necessary to move beyond the exploration of population *per se*. "Peopling" is not an autonomous self-directing social process that occurs outside cultural or political contexts. Migration, even servitude, does not create its own meanings. Rather, it is to institutions and ideologies on both sides of the Atlantic—social and cultural, governmental, legal—that historians must turn to discover the meaning of movements of population, and the shape assumed by colonial social life in general and the performance of work in particular. Concretely, to assess properly the extent to which a transformative civic identity—"freedom"—was in the offing at the end of the colonial era, we need to understand the social and institutional context of 17th- and 18th-century migration, particularly the local societies from which migrants came. We need to understand the legal culture of work and governance in those European (predominantly English) localities from which mainland America was settled so as to be able to understand the legal culture of work and governance, and hence the conditioning of freedom, in colonial America.

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[97]See above Tables 9 and 10; Farley Grubb, "Immigrant Servant Labor: Their Occupational and Geographic Distribution in the Late Eighteenth-Century Mid-Atlantic Economy," *Social Science History*, 9 (1985), 249–76, at 251–55.

[98]Fogleman, "From Slaves, Convicts, and Servants to Free Passengers," 44–45.

[99]For similar conclusions regarding the incidence of indentured servitude see Smith, *Colonists in Bondage*, 336 (by the 1670s, throughout the British American colonies, "about one white person in every ten was under indenture"); Farley Grubb, "The End of European Immigrant Servitude in the United States: An Economic Analysis of Market Collapse, 1772–1835," *Journal of Economic History*, 54 (1994), 796, n.5 (servants less than 10% of the mainland colonial population by 1700); Alice Hanson Jones, *American Colonial Wealth: Documents and Methods*, 2nd ed. (New York, 1978), III, 1787, Table 4.21 (servants 2.3% of the population by 1770s). In this light, Robert Steinfeld's contention that it was not until the last quarter of the 18th century that the incidence of indentured servitude had declined to "no more than a small fraction of the total labor force in any colony" must be considered dubious. Steinfeld, *The Invention of Free Labor*, 11.

Appendix I. European Migration to Mainland America, 1600–1780, and the Incidence of Indentured Servitude: Estimates and Sources

As stated in the text at p. 9, for the mainland alone, through 1780, current estimates suggest a total European migration of between 470,000 and 515,000. Of these some 54,500 were involuntary migrants (convicts or prisoners), the vast majority of whom entered North America during the 18th century. Of the remaining voluntary migrants, I have estimated that 48% were committed to an initial period of servitude by indenture or other arrangement. This status was substantially more common during the 17th century, when it described on average 60–65% of voluntary migrants, than the 18th, when it described on average 40%.

The 17th Century—Numbers and Sources

Breaking the figures down by century, region and component, I suggest a total 17th-century migration to the Chesapeake of 108,000 of which 80% (86,400) were servants, to New England of 24,000 of which 16.5% (4000) were servants, to the Delaware Valley of 15,000, of which 35% (5250) were servants, to the Lower South of 8000 of which 40% (3200) were servants, and to New Netherlands of 6000 of which 3300 (55%) were servants. Servants thus comprise somewhat less than 64% of all 17th century migrants (102,000 of 161,000). These estimates are constructed from the following sources: **(1)** *For the century as a whole*: Henry Gemery, "Emigration from the British Isles to the New World, 1630–1700: Inferences from Colonial Populations," *Research in Economic History: A Research Annual*, V (1980), 179–231, and "Markets for Migrants: English Indentured Servitude and Emigration in the Seventeenth and Eighteenth Centuries," in Emmer, ed., *Colonialism and Migration*, 33–54, at 40. **(2)** *For the Chesapeake:* Russell R. Menard, "British Migration to the Chesapeake Colonies in the Seventeenth Century," in Lois Green Carr *et al.*, eds., *Colonial Chesapeake Society* (Chapel Hill, 1988), 99–132, at 105 (Table 3) for 1630–1700 and at 102 for 1600–1630; James Horn, *Adapting to a New World: English Society in the Seventeenth-Century Chesapeake* (Chapel Hill, 1994), 25. (Horn agrees that some 75–80% of migrants were servants, although he proposes that overall migration was in the neighborhood of 120,000, a figure within the range of what Menard considers plausible.) **(3)** *For New England:* Gemery, "Emigration from the British Isles," and sources cited at n. 8 above. **(4)** *For The Delaware Valley*: Fischer, *Albion's Seed*, 421; Nash, *Quakers and Politics*, 50. **(5)** *For the Lower South*: McCusker and Menard, *Economy of British America*, 171–2; Galenson, *White Servitude*, 154–5, 217; Warren B. Smith, *White Servitude in Colonial South Carolina* (Columbia, 1961). **(6)** *For New Netherlands*: Ernst van den Boogaart, "The Servant Migration to New Netherland, 1624–1664," in Emmer, ed., *Colonialism and Migration*, 55–81.

The 17th Century—Discussion, and Incidence of Indentured Servitude

Gemery suggests a total British migration during 1630–1700 of 155,000, of which 116,000 is to the Chesapeake and Lower South, and the remainder to the Middle Colonies and New England. For New England I use the common 21,000 estimate for the 1630–42 period, plus a nominal 500 per decade for the remainder of the century. Servant numbers, at 16.5%, are based on the preponderance of the estimated percentages reported in text n. 8. For the Middle Colonies I use Fischer's estimate of 15,000 for migration to the Delaware Valley and Nash's 35% estimate for the proportion of servants in that migration. Together, these figures fit Gemery's overall estimate very well. For the Chesapeake I use Menard's decadal migration figures for 1630–1700, supplemented by adjustments he makes to cover the period from 1607 to 1630. (It is noticeable that this figure is lower than Menard's own "best guess" of *c.* 123,000 for the entire 17th century, but that figure is simply the middle of the range of possibilities [99,000–146,000] that he offers and does not fit particularly well with other estimates of overall 17th-century migration. Nor, in any case is it disaggregated by decade. Disaggregated figures are more useful to me later in this article, so for the sake of consistency I have chosen here to stick with the overall figure they produce.) I have deliberately set my estimate of the proportion of servants in the migration at the top of the range of guesses offered by experts (see e.g. Horn, *Adapting to a New World*, 25, who suggests indentured migrants outnumbered non-indentured by three or four to one). For the Lower South I can offer no more than a guess, based in part on the residual of round numbers left from the other, more reliable, estimates. The figure is clearly an upper bound. To the extent that it is inflated, the Chesapeake numbers could be raised by 2000–3000.

These 17th century totals are highly compatible with those offered by Aaron Fogleman, whose estimates are based on ethnicities rather than regions of reception. Fogleman proposes a slightly larger

total European migration of 165,000 (compared with my 161,000) but suggests a somewhat lower percentage (60%, compared with my 64%) of migrants committed to an initial term of servitude. Fogleman's figures include 2300 involuntary European (mostly Scottish) migrants in the category "convicts and prisoners," as well as some 1500 miscellaneous (mostly Swedish and German) migrants. It is unclear whether these are counted in the sources I have consulted. If they are not then our overall migrant numbers become very close indeed. See his "From Slaves, Convicts, and Servants to Free Passengers," 68.

The 18th Century—Numbers and Sources

For the 18th century (through 1780), the ranges of numbers offered in the literature are substantially wider and there is additional hazard for a "regions" approach in that migrant numbers and population characteristics tend to be differentiated by ethnicity rather than region of reception. Some of the origins implied by ethnic designations are also imprecise, as in the use made of the broad "Scotch–Irish" conjunction, which sometimes appears to conflate migrants originating in Ulster with those from Scotland, and sometimes seems to be used almost as a celtic catch-all. Recent research by Aaron Fogleman, however, has synthesized much of the existing literature and has produced a set of estimates that have been greeted as the best currently available for 18th-century transatlantic migration. In addition to his "From Slaves, Convicts, and Servants to Free Passengers," see Fogleman's "Migrations to the Thirteen British North American Colonies, 1700–1775: New Estimates," *Journal of Interdisciplinary History*, 22 (1992), 691–709 for a full explanation of the estimates. For comments on Fogleman's figures, see John M. Murrin, "In the Land of the Free and the Home of the Slave, Maybe there was Room even for Deference," *Journal of American History*, 85 (1998), 86; 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), 199, 201. Calculating 18th-century migration according to ethnic group and time period, Fogleman arrives at a total of 307,400 European migrants, voluntary and involuntary (convict) as displayed in Table A1.

Table A1. Eighteenth-century migration to the thirteen mainland colonies, by European ethnic group (in thousands)

Decade ending	German	N. Irish	S. Irish	Scots	English	Welsh	Other	Total
1709	0.1	0.6	0.8	0.2	0.4	0.3	0.1	2.5
1719	3.7	1.2	1.7	0.5	1.3	0.9	0.2	9.5
1729	2.3	2.1	3.0	0.8	2.2	1.5	0.2	12.1
1739	13.0	4.4	7.4	2.0	4.9	3.2	0.8	35.7
1749	16.6	9.2	9.1	3.1	7.5	4.9	1.1	51.5
1759	29.1	14.2	8.1	3.7	8.8	5.8	1.2	70.9
1769	14.5	21.2	8.5	10.0	11.9	7.8	1.6	75.5
1779	5.2	13.2	3.9	15.0	7.1	4.6	0.7	49.7
Total	84.5	66.1	42.5	35.3	44.1	29.0	5.9	307.4

Fogleman's overall figure of 307,000 is low (although not unacceptably so) when compared with global estimates in the range of 340,000–370,000 offered by several scholars for this period. See Jim Potter, "Demographic Development and Family Structure," in Greene and Pole, eds., *Colonial British America*, 135–36 (summarizing work of Henry Gemery, David Galenson and Potter himself); Henry Gemery, "Disarray in the Historical Record: Estimates of Immigration to the United States, 1700–1860," *Proceedings of the American Philosophical Society*, 133 (1989), 123–7, and "European Emigration to North America, 1700–1820: Numbers and Quasi-Numbers," *Perspectives in American History*, new ser., 1 (1984), 283–342.

The 18th Century—Discussion

Fogleman's disaggregated ethnic group figures tend in most cases to inhabit the low end of ranges suggested by the work of other scholars. In the German case, for example, the work of other scholars suggests a range of 90,000–120,000. See Marianne Wokeck, "German and Irish Immigration to

Colonial Philadelphia," *Proceedings of the American Philosophical Society*, 133 (1989), 128–43, at 128–33, and "The Flow and the Composition of German Immigration to Philadelphia, 1727–1775," *Pennsylvania Magazine of History and Biography*, 105 (July 1981), 249–78, at 260–1; Farley Grubb, "Immigration and Servitude in the Colony and Commonwealth of Pennsylvania: A Quantitative and Economic Analysis" (Unpublished PhD dissertation, University of Chicago, 1984), 15–16, 175, and "German Immigration to Pennsylvania, 1709 to 1820," *Journal of Interdisciplinary History*, 20 (1990), 417–36; A.G. Roeber, *Palatines, Liberty and Property: German Lutherans in Colonial British America* (Baltimore, 1993), ix; Gunter Moltmann, "The Migration of German Redemptioners to North America, 1720–1820," in Emmer, ed., *Colonialism and Migration*, 105–22, at 115; Bernard Bailyn, *Voyagers to the West: A Passage in the Peopling of America on the Eve of the Revolution* (New York, 1986), 25–6. Wokeck has recently refined and restated her estimates in *Trade in Strangers: The Beginnings of Mass Migration to North America* (University Park, Pennsylvania, 1999), 45–53, suggesting an overall German migration to all of North America of 111,000 and to Philadelphia alone of 80,000. The literature on German migration (excluding Wokeck's most recent work) is discussed in Fertig, "Transatlantic Migration."

In the Irish case the range of estimates is substantially wider, tending from 65,000 to in excess of 200,000. The upper bound is supplied largely by Bailyn's estimate of 100,000–150,000 "Scotch-Irish" for 1720–1760, which may, however, include other celtic migrants, and by William J. Smyth's estimate of an average of 5000 per annum "to colonial America" between 1700 and 1776. Based on projections of migrant numbers from a surname-sensitive analysis of their descendants (the U.S. population in 1790), Thomas Purvis suggests 114,000 Ulster migrants before 1775, while Wokeck's study of German and Irish immigration to Philadelphia finds that at the peak (1763–73) of Irish entries to Philadelphia in excess of two-thirds of all Irish entering the Delaware Valley were from Ulster ports, which, if a constant, would suggest (on Bailyn and Purvis's figures) an Irish total of 150–250,000. But Wokeck's estimates for actual arrivals at Philadelphia suggest much lower overall totals, and have led L.M. Cullen to propose an aggregate Irish migration of no more than 65,000. Wokeck's recent restatement of her research on Irish immigration, *Trade in Strangers*, 172–3, gives further support to the lower figure, arguing for a total Irish immigration to the Delaware Valley of 51,676. (She also reaffirms the preponderance of Northern Irish emigrants and dates the beginnings of that preponderance from the mid-1740s.) For Irish migration, see Wokeck, "German and Irish Immigration," 135–43, revised and refined in *Trade in Strangers*, 172–3; Bailyn, *Voyagers to the West*, 25–6; Thomas L. Purvis, "The European Ancestry of the United States Population, 1790," *William and Mary Quarterly*, 3rd ser., 41 (1984), 85–101, at 95–6; William J. Smith, "Irish Emigration, 1700–1920," in P.C. Emmer and M. Mörner, *European Expansion and Migration: Essays on the Intercontinental Migration from Africa, Asia, and Europe* (New York, 1992), 49–78; L.M. Cullen, "The Irish Diaspora of the Seventeenth and Eighteenth Centuries," in Canny, ed., *Europeans on the Move*, 113–49. Fogleman's aggregate of 108,600 (including involuntary migrants) is consistent with the more detailed work on the question, and is not unreasonable, but in light of Wokeck's work might best be seen as a well-documented upper bound, establishing the range for Irish immigration at 65,000–108,000.

Fogleman's figure for Scottish migration, 35,300, seems rather more questionable, being lower for the whole period through 1775 than Bailyn's estimate of 40,000 for the period 1760–75 alone. The total is also substantially lower than that of 62,500 suggested by Purvis, a figure concurred in by Smout, Landsman and Devine. See Bailyn, *Voyagers to the West*, 25–6, 170–1, 175, 243; Purvis, "European Ancestry," 95–6; T.C. Smout, N.C. Landsman and T.M. Devine, "Scottish Emigration in the Seventeenth and Eighteenth Centuries," in Canny, ed., *Europeans on the Move*, 97, 98, 104.

Fogleman's figures for English and Welsh migration are also (as he notes himself) somewhat conjectural. Here, as in the Scottish case, reliable data are sparse. However, Fischer suggests 7500 migrants (mostly from northern England and the Welsh border) arrived in the Delaware Valley in the first two decades of the 18th century and Bailyn suggests "over 30,000" English migrants for the period after 1760. Galenson offers evidence of but a modest rate of influx for the intervening period. For English migration, see Fischer, *Albion's Seed*, 421; Bailyn, *Voyagers to the West*, 25–26, 170–71, 175, 243; Galenson, *White Servitude in Colonial America*, 51–6, 93. In this light, Fogleman's suggested overall figure for the English component of the English/Welsh aggregate, 44,100 (which implies an average English migration of only 160 persons per year between 1718 and 1760) is not on the face of it unreasonable. Galenson, however, was not taking involuntary (convict) importation into account in his assessment of the modesty of rates of English migration in the period intervening between the end of early 18th-century Delaware Valley migration and the post-1760 revival. On Ekirch's figures, between 1718 and 1775 perhaps 36,000 convicts, mostly to be included in the English/Welsh category, would have entered the thirteen colonies (overwhelmingly the Chesapeake). See *Bound for America*, 114–16. Allowing for these in the overall total requires that we assume a higher average migration rate

for English/Welsh migrants (voluntary and involuntary) for the 1718–1760 period. True, some convict migrants may have become compounded with the voluntary migrant category because the processes of their transportation did not readily render them an administratively distinct migrant stream (*Bound for America*, 111–19); hence some convicts surely figure in Galenson's and Bailyn's estimates of post-1718 migration rates. But most must be considered additional to the figures already mentioned, and thus should increase the estimated English/Welsh totals. Thus, discussing English migration alone, Canny suggests that a figure of 50,000, including convicts, is appropriate for the period 1700–1775. See Nicholas Canny, "English Migration into and across the Atlantic during the Seventeenth and Eighteenth Centuries," in Canny, ed., *Europeans on the Move*, 58.

As an additional consideration, Fogleman's figure, 29,000, for the Welsh component of the English/Welsh amalgam, is based on Purvis, but the ratio of migrants to descendent population suggested by Purvis's other estimates (that is, suggested by his analyses of the relationships between Ulster and Scottish migration and Ulster and Scottish-descended population segments) would argue for a larger estimate, one in the order of 45,000. It is necessary, of course, to adjust any addition to the Welsh component to try to avoid double-counting convict importations.

Overall, were one to allow some upward flexibility in the areas of least-reliable data (that is, Scottish, English and Welsh migration), Fogleman's total, derived from detailed piecemeal research, would simply rise toward the range of the global estimates described by Potter. In this light, it is reasonable to suggest that the English/Welsh total could be about 15,000 larger than his estimate and the Scottish total (somewhat more confidently, given the greater scholarly consensus here) about 30,000 larger than he allows. Because the convict numbers in each case are more or less known quantities, these adjustments would all inflate the category of voluntary migration.

Treating Fogleman's original grand total as the lower bound, it is now clear that the appropriate range for European migration, 1700–1780, is in the order of 307,000–350,000, which, added to the 17th-century range of 163,000–165,000, gives a total European migration of 470,000–515,000, including both voluntary and involuntary migrants (the vast majority of the involuntary being 18th-century migrants).

The 18th Century—Incidence of Indentured Servitude

In estimating the incidence of migrant servants in 18th century migration, all scholars note considerable fluctuation in the proportion of servants to total numbers of migrants, varying primarily according to factors of ethnic origin and chronology of migration. In the German case, Moltmann suggests a range of 50–66%; Grubb offers "roughly half" as an approximation of incidence over the whole period 1709–1820, and much more detailed studies of redemptioner migration to Philadelphia that produce a more exact proportion of 58% for the period 1771–73, which also has the virtue of occurring at the midpoint of Moltmann's range. Relying on Wokeck, however, Fogleman arrives at a substantially lower 35% overall (this comprises a tripartite periodization of none before 1720, about one-third, 1720–60, and about one-half, 1760–1775). Wokeck herself puts the incidence of servants in total migration at "at least half" after the 1750s, implying a lower rate than this for the preceding period of heaviest German migration through 1760. (See *Trade in Strangers*, 233). Collectively, the available evidence and opinion suggests that Moltmann's range is too high, except for the years after 1760, where it is best represented by the 58% mid-point that Grubb calculated for Philadelphia. Purely for purposes of arriving at a very rough estimate of the incidence of servitude in German migration for the entire period, one might choose the mid-point between the 35% of the earlier period and the 58% of the later, arriving at 46%—reasonably close to Grubb's "roughly half." Given that the bulk of German migration occurred prior to 1760, however, 46% is a generous estimate and should be considered the upper bound.

In the Irish case, Wokeck, "German and Irish Immigration," estimates the incidence of servants at the peak of entries to Philadelphia at 20–25% among Ulster migrants and 50–66% among Southern Irish migrants. Applying these proportions to the overall Irish migrant stream, and adjusting to reflect the relative contribution of Southern and Northern Irish migrants, one arrives at an overall figure of approximately 36%. This agrees with Fogleman's figure based on the same sources: the addition of convicts to the calculation elevates the proportion of bound Irish migrants (whether voluntary or involuntary) to a bare majority of 51%. Once Wokeck's revised and refined figures (*Trade In Strangers*, 172–3) for Irish Delaware Valley migration are fully absorbed into the calculation, however, it seems inevitable that the incidence of servitude in Irish migration will fall, for, as already indicated, Wokeck's figures suggest that the preponderance of Northern Irish in overall Irish migration, clear in the 1760s, was actually well established by the mid-1740s.

In the Scottish case, Bailyn argues that for the period of 1774–6 fewer than one in five migrants were indentured. Can one, however, assume the constancy of the 1770s rate (which reflects the high proportion of family migrants in total movement)? Fogleman applies a rate of 50% for the period through 1760, producing an overall proportion of servants in total migration of 21%. Including convicts and prisoners, the incidence of bound (voluntarily and involuntarily) migrants on his figures increases to 27% of all Scottish migrants.

In the English/Welsh case the incidence of indentured servants among the early 18th-century Delaware Valley migrants is likely to have continued at approximately 35% (the rate of the late 17th century to that area). We know, however, that earlier 17th-century rates were much higher, and Bailyn shows that by the 1770s the rate had returned to better than two-thirds voluntarily bound among all voluntary migrants. Fogleman assumes the two-thirds rate holds for all voluntary English/Welsh migrants during the 18th century. Most of the century's transported convicts and prisoners also came from these sources, which results in a total bound English/Welsh migration (voluntary and involuntary) on his figures approaching 80%.

On the basis of this discussion, and adjusting the Scottish and English/Welsh figures as suggested above, it seems reasonable to summarize the incidence of servitude amongst 18th-century European voluntary migrants as follows: roughly 46% of 84,500 German voluntary migrants, 36% of 91,100 Irish voluntary migrants, 21% of 60,300 Scottish voluntary migrants, 66% of 55,600 English and Welsh voluntary migrants, and none of a remaining miscellaneous 6000 "other European" free migrants. On these figures, 40% of all voluntary migrants 1700–1775 were committed to an initial period of servitude. If one included all transported convicts as also committed to an initial period of servitude (in fact Ekirch's work would caution against doing so; see *Bound for America*, 119–20), the percentage of migrants committed to an initial period of servitude 1700–1775 would rise to 50%. Treating finally the entire 17th- and 18th-century period through 1775 as a whole, we find that some 48% of all voluntary migrants into mainland British America were committed to an initial period of servitude; including all convicts as above, the percentage rises to 54%. In each case, notwithstanding the adjustments in proportions and in particular ethnic contributions that I have suggested, the overall conclusion agrees with Fogleman's.

Appendix II. Seasoning and General Mortality in the Chesapeake Region: Estimates and Sources

The seasoning and general mortality estimates used in the text to refine estimates of servant persistence in the 17th-century Chesapeake population are derived from the following sources: Horn, *Adapting to a New World*, 138; Canny, "English Migration," 48; Lorena Walsh, "Servitude and Opportunity in Charles County, Maryland, 1658–1705," in Aubrey C. Land *et al.*, eds., *Law, Society and Politics in Early Maryland* (Baltimore, 1974), 111–33, at 115–17; Lorena Walsh and Russell R. Menard, "Death in the Chesapeake: Two Life Tables for Men in Early Colonial Maryland," *Maryland Historical Magazine*, 69 (1974), 211–27; Lois Green Carr and Russell R. Menard, "Immigration and Opportunity: The Freedman in Early Colonial Maryland," in Thad W. Tate and David L. Ammerman, eds., *The Chesapeake in the Seventeenth Century: Essays on Anglo-American Society* (New York, 1979), 206–42; Carr, "Emigration and the Standard of Living," 274–5; Morgan, *American Slavery, American Freedom*, 175–6, 297–8; Darrett B. and Anita H. Rutman, *A Place in Time: Middlesex County, Virginia, 1650–1750* (New York, 1984), 258 nn. 15 and 16; Terry L. Anderson and Robert P. Thomas, "The Growth of Population and Labor Force in the 17th-Century Chesapeake," *Explorations in Economic History*, 15 (1978), 298–9; Kevin P. Kelly, "A Demographic Description of Seventeenth-Century York County, Virginia" (unpublished Research Paper, Department of Historical Research, Colonial Williamsburg Foundation).

It is generally agreed that "seasoning" (high rates of mortality among recent immigrants, now attributed to the effects of malaria on an entering population with no natural immunity) was extreme in the Chesapeake, and that general mortality rates were also severe. Horn proposes an early mortality rate of up to 40% over the first two years; Walsh finds a rate of 40% over three years not unreasonable. Along with Morgan and the Rutmans, Walsh proposes that seasoning and general mortality would account for 45–50% of entering servant migrants before the end of their terms. Carr and Menard suggest that mortality averaged 10% per annum and that no more than 60% of immigrant servants survived their terms. Anderson and Thomas propose an average early mortality rate of 35%, after surveying 17th-century sources ranging from a high of 60% to a low of 25%. As to general mortality, Kelly finds average death rates in York County, Virginia ranging from 39 to 68 per 1000 during the second half of the 17th century, depending upon parish. An average of Kelly's averages produces a rate of 54/1000.

Text Table 2 assumes an average contract term of five years (that is, 10% longer than the average for contracts concluded in England prior to departure) and a survival rate over a five-year term of 60% of entrants. (In the context of the literature on the 17th-century Chesapeake discussed above, both assumptions are reasonably generous and thus will tend if anything to inflate servant numbers.) Table 2 applies an attrition rate of 32.8% to the hypothetical servant entry cohort, calculated to reflect an initial early mortality of 25%, and a subsequent constant death rate of 54/1000 (5.4%) per annum to the survivors (i.e. where N_1 is the size of the entry cohort, the percentage of survivors (N_2) is calculated as $[(N_1—25\%)(-5.4\%)(-5.4\%)(-5.4\%)]$. This produces the consensus 60% survival rate over a five-year term while reflecting the considerable differential in death rates between initial migrants and seasoned survivors (25% of the entry cohort are presumed to die within a year of landing; 5.4% of the survivors are presumed to die in each of the next four years). Alternative calculations can be found in Appendix III, Table A2, "European Servant Migration and Persistence in Population: Maryland and Virginia 1600–1700: Alternative Estimates."

Appendix III. Supplementary Estimates

As indicated in the text, Table 2 assumed a five-year term and 60% survival. Attrition was calculated (at 32.8%) to reflect the differential impact of seasoning mortality on initial migrants and general mortality on survivors.

Table A2. European servant migration and persistence in population, Maryland and Virginia 1600–1700: alternate estimates (Alt Est)

Decade ending	White population @ end of decade	Percentage servant (Table 2)	Percentage servant Alt Est A[1]	Percentage servant Alt Est B[2]	Percentage servant Alt Est C[3]	Percentage servant Alt Est D[4]
1610*	0.3					
1620*	0.9					
1630*	2.4	44.5	50.0	53.8	62.5	84.2
1640	8.0	22.4	33.0	35.9	41.9	56.0
1650	12.4	16.8	18.6	20.2	23.6	31.7
1660	24.0	18.1	20.0	21.8	25.4	34.1
1670	38.5	13.0	14.4	15.7	18.3	24.7
1680	55.6	9.2	10.9	11.9	13.9	18.7
1690	68.2	5.2	5.8	6.3	7.4	9.9
1700	85.2	4.4	4.7	5.3	6.2	8.2

* Approximation.

[1] *Alternate estimate A* assumes a five-year term and a steady compound attrition rate of 10% p.a. over the contract term (60% survival rate). A steady rate makes no allowance for catastrophic early mortality and assumes all servants died at the same rate. Although it makes the same survival assumption, *A* undoubtedly understates the extent of the diminution of the servant population in any given year because it treats the largest cohort of the servant population (new arrivals) as if its members were dying at the same rate as seasoned survivors.

[2] *Alternate estimate B* assumes a six-year average term (or 33% longer than the average contract term concluded in England) and the same attrition assumptions as Table 2, i.e. it attempts to build in the differential in mortality rates experienced by the different component elements of the servant cohort.

[3] *Alternate estimate C* assumes an average seven-year term (55% longer than the average term concluded in England) and the same attrition assumptions as Table 2.

[4] *Alternate estimate D* has been calculated as an outlier. This estimate changes two assumptions used to construct Table 2. First, it assumes an average eight-year term of service (88% longer than the average term concluded in England). Second, and more important, it inflates the overall number of migrants to the Chesapeake to 150,000, which is Menard's absolute upper bound figure for the century. Menard himself discounts this figure. See Menard, "British Migration to the Chesapeake Colonies," Tables 1 and 2–3. It distributes this inflated migration by decade according to the breakdown offered in the same source (Tables 2 and 3), and assumes that 80% were servants. It makes the same attrition assumptions as Table 2 in this article.

Table A3. Servant persistence in the Maryland population, 1650–1750

Decade	Servant migration to Maryland	Servant population†	White population in thousands	Percentage servants
1650/60	3680	1236	4.0	30.9
1660/70	9760	3279	11.4	28.8
1670/80	9920	3333	20.0	16.6
1680/90	3975*	1335	26.2	5.1
1690/1700	4200*	1411	34.1	4.2
1707 census[1]		3003	36.8	8.1
1755 census[2]		6871	107.2	6.4

Source: Text Table 1, supplemented by Abbot Emerson Smith, *Colonists in Bondage: White Servitude and Convict Labor in America, 1607–1776* (Chapel Hill, 1947), 324.
* Estimates.
† Adjusted as in text Table 2.
[1] Total population 41,193. (*N* slaves 4657; *N* "souls" 33,833; *N* servants 3003. Maryland population in 1700 was 34,100 and in 1710 43,900. In 1704 the white population was 30673.) Servants and slaves together thus constituted 18.5% of total population. The increase in the size of the servant population in the early 1700s, as compared with the population estimates for the previous two decades accords quite well with the argument advanced by Farley Grubb and Tony Stitt for the major effects of European war in the 1680s and 1690s in interrupting servant migration to the Chesapeake, followed by temporary alleviation of the interruption during the period of peace lasting 1697–1702. See Farley Grubb and Tony Stitt, "The Liverpool Emigrant Servant Trade and the Transition to Slave Labor in the Chesapeake, 1697–1707: Market Adjustments to War," *Explorations in Economic History*, 20 (1994), 1–31.
[2] Total population 153,565; *N* free whites 98357; *N* convicts 1981. (Servants were thus 4.5% of total population and 6.4% of white population.) The African-American population was 46,356 (*N* mulatto 3592, *N* Negro 42,764). If we assume that the African-American population was entirely enslaved, then the sum of the servant, slave and convict populations comprises 36% of total population.

Kevin Kelly's work on York County, Virginia enables us to refine estimates of the incidence of indentured servitude in overall population, and also to track the reorientation of planters in that area toward heavy dependence upon slavery, a development that occurred earlier in York County than elsewhere in the tidewater region. Table A4 shows Kelly's estimate of county population during the last four decades of the 17th century, the proportion of tithables in that population, the proportion of unfree tithes and the distribution of the unfree between categories of indentured servant and slave. Kelly's detailed results are consistent with my more general estimates for the Chesapeake region (see Text Table 2).

Table A4. Servant incidence in the Virginia population, 1660–1700

Year	York County population[1]	% White	% Black	% Tithable	% Unfree	% Slave[2]	% Servant[2]	% Slave[3]	% Servant[3]
63	2257	1941	14.0	48.8	19.9	10.2	9.7	6.6	13.3
68	1905	1631	14.4	46.5	21.5	12.2	9.3	7.2	14.3
73	2153	1821	15.4	44.6	19.8	12.0	7.8	9.5	10.3
78	2167	1779	17.9	43.3	25.0	12.2	12.9	12.0	13.1
83	2481	2099	15.4	41.6	21.9	11.3	10.6	12.9	8.9
88	2458	1890	23.1	40.5	20.5	18.1	2.4	12.1	8.4
93	2631	1807	31.3	39.5	21.6	21.1	0.4	20.8	0.8
98	2820	1949	31.0	38.8	20.8	20.4	0.4	20.0	0.7

Source: Kevin P. Kelly, "A Demographic Description of Seventeenth-Century York County, Virginia" (unpublished Research Paper, Department of Historical Research, Colonial Williamsburg Foundation).
[1] This is Kelly's "Preferred Estimate" of three undertaken.
[2] This is Kelly's first attempt at a distribution of unfree tithes.
[3] This is Kelly's second distribution, based on the proportion slaves:servants in York County inventories, by decade. The 1638–59 inventories show a ratio of 0.41 slaves:1.0 servants (71% servants); 1660–69 inventories show a ratio of 0.48 slaves:1.0 servants (67% servants); 1670–79 inventories show a ratio of 0.92 slaves:1.0 servants (52% servants); 1680–89 inventories show a ratio of 1.44 slaves:1.0 servants (41% servants); 1690–99 inventories show a ratio of 24.9 slaves:1.0 servants (3.8% servants).

Appendix IV. Servants' Ages

My own survey of the county court records for York County, Virginia, discloses 430 instances (1646–1700) in which servants entering without indenture were brought before the court to have their ages determined (313 of these instances were recorded in the 20 years beginning 1660). In these cases the mean age determined was 14.3 years (median 15.0). In the case of boys ($N = 364$) the mean age determined was 14.6 years (median 15.0). The youngest recorded was 5. In the case of girls ($N = 58$) the mean age determined was 12.3 years (median 14.0). The youngest was 3. In the remaining cases the gender of the child was indeterminate. See also Menard, "From Servants to Slaves," 363–5.

In his pathbreaking study a half-century ago, Abbott Emerson Smith observed that "during the seventeenth century there were certainly a great many servants brought to the colonies without indenture who were under age." Smith found 134 such cases recorded in Northumberland County, Virginia 1668–74; "about the same" in Lancaster County, Virginia during the 1670s and another 64 during the three years 1697–9; and 128 in Talbot County, Maryland, 1662–74. Smith reports that "most" were 13–18 years old, the youngest 9. See *Colonists in Bondage*, 231. For other narrative accounts of the transportation of unaccompanied children as servants, see Robert C. Johnson, "The Transportation of Vagrant Children from London to Virginia, 1618–1622," in Howard S. Reinmuth, Jr., *Early Stuart Studies: Essays in Honor of David Harris Wilson* (Minneapolis, 1970), 137–51; Peter Coldham, "The 'Spiriting' of London Children to Virginia," *Virginia Magazine of History and Biography*, 83 (1975), 280–87. Other scholars have added a degree of precision to the subject. Thus, Edmund Morgan finds that in Lancaster County, Virginia, 1662–1680, of 296 servants without indenture brought into court for determination of term of service, 264 were adjudged younger than 19, and 133 younger than 16 (mean age was 16.0); in Norfolk County, Virginia, 1662–1680, of 72 servants without indenture, 71 were adjudged younger than 19 (median 15.5). See Morgan, *American Slavery, American Freedom*, 216. Douglas Deal finds that in Accomack County, Virginia, 1663–97, of 270 servants without indenture, 266 were adjudged younger than nineteen (median age 14.0); in Northampton County, Virginia, 1663–97, the median age of 88 servants without indenture adjudged in county court was 13.0. See Douglas Deal, *Race and Class in Colonial Virginia: Indians, Englishmen, and Africans on the Eastern Shore During the Seventeenth Century* (New York, 1993), 129. Were one to estimate the average number of "custom of country" hearings across these six counties alone for a representative period, say 1660–1680, the result would suggest some 650 individual hearings per decade, a figure equivalent to roughly 10% of the estimated total number of migrants into all of Virginia during the same period (and certainly in excess of 10% of estimated servant migration). "Custom of country" servants were also likely to make up a larger proportion of the actual servant population than their numbers would suggest for, being younger, they generally served longer. James Horn observes generally that of Lancaster County's servants in the 1650s, "a large proportion were in their midteens or younger." *Adapting to a New World*, 184. Lorena Walsh finds that in Charles County, Maryland, 1658–81, nearly 50% of servants served according to custom of country. In the case of male servants the mean age determined was 16.47, decreasing to 15.82 during the subsequent two decades. In the case of female servants the mean age was 18.19 decreasing to 17.44. See Walsh, "Servitude and Opportunity in Charles County, Maryland, 1658–1705," in Land *et al.*, eds., *Law, Society and Politics*, 111–33, at 112–3. Gloria L. Main concludes that an actual majority of the servants imported into Maryland after 1680 came without prior indentures and served by custom of country. See Main, *Tobacco Colony*, 99.

Evidence from the Delaware Valley and from New England indicates that importation of servants in their early teens was a general, not merely a Chesapeake, phenomenon. On the Delaware Valley see n. 88 [ages of servants brought before courts in the late 17th century Chester County settlements]. In New England servant importation was minimal after 1640 and there were no requirements for the recording of youthful migrant servants' ages. Nevertheless, to the extent that details of migrant servants

crop up in local court records they are overwhelmingly in their early-to-mid teens. See, e.g. Richard Coye v. Mr William Hubbard, Sr. (March 1655), *Records and Files of the Quarterly Court of Essex County*, I, 381–2.

Russell Menard has hypothesized that the proportion of youthful servants increased markedly over the course of the 17th century, from 5% below age 16 in the 1630s to perhaps 15% in the 1680s and 40% in the 1690s. The figures suggested above (10% + for the period 1660–80) are clearly in line with this trend. Menard associates the decline in age at entry with a decline in the social status of the emigrant servant population, arguing that migrant servants were increasingly from the margins of English society, and in particular that "servants by custom had perhaps usually been life-cycle servants in England," implying that servants with pre-negotiated indentures were not. See his "British Migration to the Chesapeake Colonies," 127, 128. It may indeed be the case that servants were becoming younger, but this may have as much to do with record-keeping as anything else. [In Virginia, for example, there was no requirement that unindentured servants have their ages recorded in court before March 1657/8. See 9 Commonwealth Act xviii, in William Waller Hening, *The Statutes at Large; Being a Collection of all the Laws of Virginia* (New York, 1823), I, 441–2.] Certainly it would be wrong to assume that the importation of young unindentured servants had not excited attention from early on. As Warren Billings has noted, the importation of servants without indenture was an issue virtually from the beginning of the Virginia settlement, leading to passage of the first "custom of country" legislation in 1642/3. See Warren M. Billings, "The Law of Servants and Slaves in Seventeenth Century Virginia," *Virginia Magazine of History and Biography*, 99 (1991), 45–62, at 48–9. That many of these were in their early teens, as they were later in the century, is suggested by 1 Commonwealth Act II (October 1649), dealing with the listing of tithable persons: "Whereas it appeareth to severall Grand Assemblies that the lists of tithable persons are very imperfect, and that notwithstandinge the yearly importation of people into the collonie, the number of tithables in the said lists is rather diminished then [*sic*] augmented, which is in great part conceived, by this Assembly, to happen, in that all under the age of sixteen years are exempted from the lists, and that once passing under that age they are seldom or never acknowledged to exceed the same … Bee it therefore enacted … That all male servants imported herafter into the collony of what age soever they be, shall be brought into the lists…." In *Statutes at Large*, I, 361.

Nor does Menard's division of the indentured population into life-cycle servants and others, according to whether or not they were in their early teens and had not negotiated indentures prior to embarking, seem warranted. Life-cycle service in England could begin any time after age 10, with increasing incidence of entry at ages 12–15. Peak incidence of service was in mid-to-late teens, with movement out of service beginning by age 20–21 and accelerating thereafter. In other words, the age-profiles of those entering and occupied by life-cycle service in England and indentured service in early America coincide quite precisely. It is clear that indentured servitude became a means for substantial numbers of farmers, adult laborers and tradesmen to finance emigration—some 20% of those embarking under indenture were, we have seen, 25 or older, and amongst those in the range 20–24 would be numbers of laborers and tradesmen who had recently exited periods of service or apprenticeship. But both servants embarking without indenture and those with indentures are more likely than not to have been recruited from among the youthful male population either entering or already part of the life-cycle servant labor force of 17th-century England. (The same, Fertig argues, was true of their German counterparts in the 18th-century middle colonies. See his "Eighteenth-Century Transatlantic Migration," 278, 282.) It is more likely that servants imported without indenture were drawn from among those entering service for the first time at the beginning of the cycle, without experience and, therefore, without the knowledge to negotiate indentures. Those embarking under indenture are likely to have been drawn in good part from the population of youthful servant labor somewhat further along in the cycle, with some skills to offer (in the case of those coming from the artisan trades) and with some experience in reaching bargains. Certainly, as Galenson among others has shown, indenture terms do vary with increasing age in favor of the servant, indicating a premium on age and acquired skill in the negotiating process. See Galenson, *White Servitude in Colonial America*, 28–30, 103–9. On the age profile of life-cycle service in England, see Kussmaul, *Servants in Husbandry*, 70–85; Graham Mayhew, "Life-Cycle Service and the Family Unit in Early Modern Rye," *Continuity and Change*, 6 (1991), 201–26. See also Griffiths, *Youth and Authority*, 290–389. For emphasis on the youthfulness of Chesapeake indentured servants similar to mine, see Jones, *American Work*, 60–62. On the social background of those indentured prior to embarkation, see Mildred Campbell, "Social Origins of Some Early Americans," in James M. Smith, ed., *Seventeenth-Century America: Essays in Colonial History* (Chapel Hill, 1959), 63–89; David Galenson, " 'Middling People' or 'Common Sort'? The

Social Origins of Some Early Americans Reexamined," *William and Mary Quarterly*, 3rd ser., 35 (1978), 499–524; Horn, *Adapting to a New World*, 31–8.

At bottom the issue here is really the reliability of the conclusions that historians have drawn regarding the characteristics of the migrant servant population as a whole reached on the basis of records of indentures agreed prior to embarkation, given that the latter tend to bias the age range and skills of the migrant servant population upward, and the term of service downward. See Gemery, "Markets for Migrants," 36. As Gemery notes, once we recognize that a substantial number of migrant servants were being indentured by custom of country after disembarkation throughout the century, and that this group was overwhelmingly younger and less skilled than those traveling under indenture, we must adjust the age, skill and term length profile of migrant servants as a whole. We must also look on the legal-institutional context of indentured servitude in a new light, as a policing of adolescence as much as of work discipline.