NBER WORKING PAPER SERIES

ON THE AGE AT LEAVING HOME IN THE EARLY NINETEENTH CENTURY: EVIDENCE FROM THE LIVES OF NEW ENGLAND MANUFACTURERS

David W. Galenson

Working Paper No. 1706

NATIONAL BUREAU OF ECONOMIC RESEARCH 1050 Massachusetts Avenue Cambridge, MA 02138 September 1985

The research reported here is part of the NBER's research program in Development of the American Economy. Any opinions expressed are those of the author and not those of the National Bureau of Economic Research.

On the Age at Leaving Home in the Early Nineteenth Century: Evidence from the Lives of New England Manufacturers

ABSTRACT

Much recent research has focussed on some decisions that affected family composition in the past, including the determination of the age of marriage and the timing of fertility. This paper considers another such decision that has been relatively neglected, the determination of the age at which children left the parental home. Observations drawn from a collection of biographies of successful New England manufacturers, most of whom departed from their parents' homes in the first half of the nineteenth century, indicated that their age of departure was concentrated in the late teen ages and early twenties, with a median of 18 years. Multivariate analysis suggested that the age at which these men had left home varied directly with family income or wealth and inversely with the opportunity cost of their retention at home. Sons whose fathers had died tended to leave home earlier than otherwise, as did those whose first job away from home was in the employ of a relative, while those whose families invested more in their formal education appear to have stayed home longer.

David W. Galenson
Department of Economics
University of Chicago
Chicago, IL 60637

I. Introduction

Recent years have witnessed an intensification of interest in research on family behavior. Economists have increasingly turned their attention to analysis of the determinants and consequences of family decisions, and historians have become more concerned with charting trends in the composition and behavior of families in the past. Considerable attention has been devoted to some key decisions in the life-cycle of individuals that affect the family, including the determination of the age at marriage and the timing of fertility. Another such decision that has been recognized but has received relatively little direct attention is that of when children departed from the parental home. 1

Departure from the parents' home is of course only one of the transitions that resulted in a child's eventual independence from the parents; the family economy would be affected not only by the child's place of residence, but also by any flows of income that continued from parents to child. Yet the residential decision is an interesting one for a number of reasons, with implications for migration as well as family composition. This paper will extend our knowledge of this aspect of the history of family behavior by suggesting an analytical approach to the determination of the age at leaving home and adducing empirical evidence on this decision for a sample of individuals from nineteenth-century New England.

II. An Economic Interpretation of the Age at Leaving Home

The age at leaving home can be seen as one outcome of an implicit process of bargaining among family members that determines the allocation of the family's resources. As a first approach, it might be posited as a working hypothesis that within the relevant range of children's ages, both

parents and children derive utility from the continuing presence of the children in the parental home, and that this retention is a normal good. Increases in total family income would therefore tend to be associated with increases in the age at which children leave their parents' households.

Economic analysis of family behavior has recently developed a number of implications of the fact that parents must determine not only how many children they will have, but also the amount of resources they will devote to each child. One analytical approach to this decision has been a formulation in which parents derive utility from the quality, as well as the quantity, of their children. This view assumes that the quality of a child can be influenced by the family in a number of ways, principally through investment in the child's health and education. An economic interpretation of the age at which children leave home can be based in part on this formulation. In part, the amount of time a child spends in the parental home will serve as an index of investment in the child's quality, with a later age at leaving home indicating a larger investment. This was particularly true in the past, when sending children away to school was relatively uncommon; until quite recently, most children were likely to attend school only if they were living with their parents. 3 In addition to formal education, nineteenth-century parents could choose to teach their children a variety of occupational skills. 4 Still other investments in children retained at home might have been significant, for parents could be expected to maintain more control over other aspects of their children's lives if the children continued to live in the parental home than if they had moved away.

In the presence of any of these forms of investment by parents in their children, the length of time a child spent in the parental home would

tend to be a useful index of the quality of the child, with a later age of departure signalling a longer period, and generally a greater amount, of investment. The higher the rates of return to these investments in the children's human capital, the stronger the association would tend to be between family wealth and the length of time the child spent at home, for poorer families would lack the capital to finance desirable investments in the education of their children.⁵

Yet the age at leaving home in the nineteenth century cannot be interpreted solely in this way, for another set of forces also affected the timing of the child's departure from home. The premise that retention of a child at home is a normal good for both parents and children also implies that an increase in family income due to the ability of the child to contribute while remaining at home would tend to result in a later age for the child's departure. Therefore if employment opportunities existed near the parents' home, the child might take a job and begin earning wages while remaining at home, thus allowing some families to be able to afford to retain their children that might otherwise have been unable to do so. Work within a family business, or on a family farm, would of course constitute such an employment opportunity just as much as would wage labor elsewhere; families with businesses or farms large enough to employ the labor of workers in addition to the parents could substitute their children for hired laborers, thereby gaining income from this employment that would allow the family to retain its children at home longer.

Relatives outside the nuclear family also affected the age at which children left home in the past. Grandparents or aunts and uncles played an important role when the death of a father left a widow unable economically to provide a home for the children. Even in cases in which both parents

survived, extended families were a potential source of employment or economic help at an early stage of a child's career, and a move to the household of a relative might be seen as a special case of departure from home, in which the resources of the extended family provided a way for the child to leave the parental home but to retain in some degree the economic security of residence with adults likely to have some altruistic interest in his welfare.

One way to place the preceding discussion within a unified framework is to consider the child's departure from home as a migration decision. A behavioral assumption underlying a standard economic analysis of migration is that an individual moves in order to maximize net personal gain, with the latter often represented in empirical studies by the present value of future real income. An extension of this approach to the migration of families composed of husbands and wives has assumed that the movement of households is motivated by net family gain rather than the net personal gain of either spouse. Choices of location made by couples create the possibility of positive costs for either or both individuals, in the form of a real income less than that which would be available to the same individual unencumbered by the family relationship. These costs are borne by the family as long as the benefits from marriage are greater than the pecuniary losses; otherwise the husband and wife separate, and independent migration of the individuals occurs. T

This analysis of the migration decisions of spouses can be extended to include those of children. The assumed behavioral motivation of the maximization of net family gain can be maintained, and the costs to children of the family's location can be measured as the difference between the

income available to the child at the family's chosen location and the maximum income available to the child elsewhere. Positive levels of earnings foregone by the child due to remaining with his or her parents do not necessarily imply the child's departure, for these losses might be compensated by some combination of the child's nonpecuniary gains from residence with the family and income transfers from other family members.

In this formulation, investment by the family in the education of a child living at home is a benefit to the child which, ceteris paribus, lowers the net gains to leaving the family during the period in which investment continues. The availability of work in a family business, or in a business near the family home, will similarly tend to lower the net income gains from leaving the family. On the other hand, the better the opportunities available elsewhere, the greater the potential gains to the child from leaving the family. The ability of relatives living elsewhere to offer jobs to the child creates one case in which good opportunities might be available to the child at a relatively early age, because of the possible willingness of relatives to discriminate in hiring in favor of family members.

Changes in the composition of the family can clearly affect the family's choice of location. A relatively common instance in the past might have been the death of a parent. In the case of a husband's death, a wife who did not remarry might often have had to sell the family farm or business and move elsewhere to find employment; her new location might then be less desirable for the children, resulting in their departure from home. The father's death would of course not invariably have caused the family to relocate, for even if the wife did not remarry, she might have continued to operate the family business with the help of her children or hired labor.

Indeed in some cases the absence of the father could have increased the productivity of a child on the family farm or business, and could therefore have delayed the child's departure from home.

The migration framework offers a relatively straightforward explanation of when, and why, children leave home. Apart from time spent in consumption, the time of children can broadly be divided into that devoted to investment in human capital and that spent in production. The relative amounts of time spent in these two activities are influenced by family wealth, as well as such other factors as the quality of local educational and work opportunities. The typical pattern is for the child's time to be spent relatively more in investment at young ages and then, at varying rates, to shift progressively toward production as the child grows older. Many types of investment can be done at lower cost while the child is at home, and this was probably true to an even greater extent in the past than today. Under such conditions, the larger the share of the child's time spent in investment, the greater the cost advantages from residence with the family, and the more likely the child would be to remain with his parents. The same is not true for time spent in production. Productivity in most occupations varies considerably across space, due to differences in local factor endowments and past investment patterns. If the location of a child's family is not that in which his productivity in his chosen occupation is greatest, the cost in earnings foregone due to remaining with his parents will rise as the child shifts a larger share of his time into production. He will leave home when this cost becomes larger than the total benefits of remaining, with the latter comprised of nonpecuniary benefits as well as investment and other income transfers from the family.

III. The Van Slyck Sample

Relatively little is known about the age at which children typically left home at most times and places in the past. In part this is due to a lack of sources that yield quantitative information, for the departure of a child from home did not attract the attention from such institutions as the state or the church that was afforded to such other events in the experience of families as marriages, births, and deaths. This investigation will rely on an unusual source of evidence that provides direct observation of the age at leaving home and a number of possible influences on it for a limited but interesting sample of individuals.

In 1879, a Bostonian named J.D. Van Slyck published a two-volume work entitled New England Manufacturers and Manufactories. In a brief introduction, the author criticized the neglect of the histories of "the great manufactories of New England, showing the rise, the marvelous growth, the products of each," and argued that the success of these industrial enterprises was due so largely to individual enterprise that "to withhold from their histories the personal lives of those who planted and fostered them, would be little more than to exhibit the form without the spirit." Van Slyck undertook to remedy this neglect by writing short histories of the leading manufacturing firms of New England, including in them what he called "life-sketches" of their founders or current chief executives. The capsule biographies included in his two volumes provide the evidence for this investigation.

Van Slyck did not describe how the information for these biographies was gathered, commenting only that "no effort or expense has been spared to make this a work of real value." The detail and accuracy of the biographical sketches support Joseph Kett's judgment that these were normally based

on autobiographical data submitted by the subjects. The factual orientation of the biographies is also consistent with Van Slyck's stated intention to restrict himself to "simple, concise and true narrative . . . avoiding much use of that eulogistic 'ornamentation' so often degraded to fulsomeness." 10

The format of the biographies is not standard, and the amount of information varies considerably across individuals. Yet sufficient information was available on a number of potentially important variables to allow their inclusion in the data set analyzed here. A full listing of definitions of the variables included and a description of the practices followed in coding them is provided in the appendix. The age of the individual upon leaving home can be obtained from most of the biographies, from either direct statements or indirect inferences. Most biographies provide information on the occupations of the subject's fathers, and many devote close attention to the early education and work experience of the future manufacturers.

Table 1 presents the sample means of the variables coded in this investigation, and indicates the number of biographies containing information on each variable. The mean date of birth was 1815; nearly ninetenths of the sample members left their parental homes during the first half of the nineteenth century.

The mean age at leaving home for 233 sample members was 18 years. Table 2, which presents the full distribution of this variable, shows that 18 was also the median age. Sample members began leaving home in significant numbers around the age of 10, and the pace accelerated sharply in the early teens: whereas less than 5 percent had left home before the age of 10, and less than 10 percent by age 12, more than a quarter had left by the age of 16. Half the sample members had left home by 18, and more than

TABLE 1
SUMMARY STATISTICS, VAN SLYCK SAMPLE

Variables	N	Mean
Year of birth ^a	290	814.8
Age at leaving home	233	17.91
Father alive when subject left home	297	0.90
Employed by father while at home	286	0.63
Employed by non-family member while at home	281	0.26
First employed by relative away from home	291	0.11
First move to school	291	0.10
Attended boarding school before final departure from home	297	0.12
Apprenticeship	293	0.17
Parents' nativity	297	0.007
age at first marriage ^C	87	26.16
Birth order	102	0.46
Cather's occupation Agriculture only Manufacturing only Services only	235 235 235	0.33 0.40 0.11
Agriculture and Manufacturing Agriculture and	235	0.10
Services Manufacturing and	235	0.04
Services Agriculture, Manu-	235	0.004
facturing and Services	235	0.02

Notes: For definitions of all variables, see appendix.

Source: J.D. Van Slyck, <u>New England Manufacturers and Manufactories</u> (Boston: Van Slyck and Company, 1879), 2 volumes. For references to supplemtary sources, see appendix.

a. Year of birth was coded as last three digits of year. Standard deviation = 15.8 years.

b. Standard deviation = 4.68 years.

c. Standard deviation = 5.81 years.

TABLE 2
FREQUENCY DISTRIBUTION OF AGE AT LEAVING HOME, VAN SLYCK SAMPLE

Age	Number	Cumulative Percentage
7	2	0.9
8	3	2.1
9	4	3.9
10	4	5.6
11	6	8.2
12	7	11.2
13	5	13.3
1 4	20	21.9
15	14	27.9
16	21	36.9
17	28	48.9
18	21	57.9
19	18	65.7
20	20	74.2
21	18	82.0
22	6	84.5
23	8	88.0
24	10	92.3
25	Ц	94.0
26	4	95.7
_ 27	1	96.1
28	4	97.9
30	3	99.1
33	1	99.6
34	1	100.0
Total	233	100.0

Source: See Table 1.

80 percent had left by the age of majority. Nearly 95 percent had left by the age of 25, and virtually all had left by the age of 30.

Most of the sample members' fathers (90 percent) were still alive when their sons left home. Nearly two-thirds of the sample members had worked for their fathers sometime before leaving home. Just over a quarter of all sample members had worked locally outside the family before leaving home. One in ten first worked for relatives after leaving home, 12 percent attended boarding school and returned to their families sometime before their final departure from home, and one in ten attended school immediately after leaving home and did not subsequently return home.

There was no immediate link for most sample members between departure from home and marriage. The mean age at marriage for 87 sample members for whom this information is available was 26.2 years, more than eight years greater than the sample mean age at leaving home. ¹¹ Information on both age at leaving home and age at marriage is available for 72 sample members: the mean interval between these events for those individuals was more than nine years. Only eight of the 72 (11 percent) married in the same year they left home, while 80 percent of them waited at least four years to marry, and half married fully nine or more years after leaving home.

The distribution of fathers' occupations provides one opportunity to compare the sample to larger contemporary populations. Only 49 percent of the sample members were sons of farmers. In contrast, as late as 1830 more than 70 percent of the American labor force remained in agriculture. Two-fifths of the sample members were sons of men who earned their living exclusively in manufacturing activities, whereas Stanley Lebergott estimated that in 1840 less than 10 percent of the national labor force was engaged in manufacturing. Since Van Slyck's sample was composed of successful manu-

facturers, it is hardly surprising that sons of manufacturers are disproportionately represented in it, or that sons of farmers are underrepresented.

Yet in view of the existence of major regional differences in the distribution of economic activity in the early nineteenth century, a concentration of manufacturers in a sample of New England residents might also appear unsurprising. In fact, estimates of the sectoral distribution of occupations in nineteenth-century Massachusetts suggest that the members of Van Slyck's sample might have come from backgrounds not far from a representative sample in this respect. Maris Vinovskis estimated that the share of Massachusetts' labor force in agriculture fell from 58 percent in 1820 to 42 percent in 1840, while manufacturing accounted for 30 percent in 1820 and 41 percent in 1840. The fathers of Van Slyck's sample members appear to have been somewhat more heavily concentrated in manufacturing, with 40 percent identified exclusively as in that sector and a total of 52 percent mentioned as having some connection, and less oriented toward agriculture, with 33 percent exclusively in the sector and 49 percent engaged at least part-time. Yet depending on how the fathers described as engaged in more than one activity in the biographies would have been categorized by the federal census, the real differences in the distribution of activities between the fathers of sample members and the working population of Massachusetts at the time might actually have been quite small. The occupations mentioned by Van Slyck can of course tell us nothing of the wealth or other important characteristics of these families relative to the general population, but it is of interest to know that the sample members might have come from families distributed among economic activities in proportions similar to the general population of the region where they lived.

Pending further research on the age at leaving home among other groups, little can be said of the representativeness of the experiences of the members of this sample. While the members of Van Slyck's sample might have come from backgrounds similar to those of many of their peers, their inclusion in his survey was premised on considerable eventual economic success, and therefore their actions cannot simply be assumed to have resembled those of other youths of their time. Van Slyck's sample furthermore contains only men; parallel information for women would be of obvious interest. For these reasons, the results presented below can be interpreted only as statements about the behavior of the sample members; they might also be seen as a source of hypotheses to be tested when the analysis of other data allows comparisons with other groups.

IV. Regression Results

Table 3 presents the results obtained from estimation of a regression equation in which the age at leaving home was specified as a linear function of a number of independent variables on which information was available in the biographies, and which the analysis outlined above suggested might be relevant to the determination of the age at leaving home. 14 Overall, the explanatory variables account for one third of the variance in the age at leaving home, and their joint effect is highly significantly related to the dependent variable.

A number of the independent variables individually appear to have had a major impact on the age at leaving home. Sons with living fathers remained at home $2\frac{1}{2}$ years longer on average than those sample members alike in other respects whose fathers had died prior to the sons' departure from home. That the plight of nineteenth-century children whose fathers died was

TABLE 3

REGRESSION RESULTS, VAN SLYCK SAMPLE
DEPENDENT VARIABLE: AGE AT LEAVING HOME (Years)

Independent variable	Estimated Coefficient	Standard Error	Significance Level
Father alive	2.49	1.02	0.02
Employed by father while at home	4.30	0.97	0.0001
Employed by non-family member while at nome	2.63	0.70	0.0002
Employed by relative in first job away from home	-2.61	0.91	0.005
First move to school	-0.61	1.04	0.56
Attended boarding school before final departure from home	1.96	0.88	0.03
Apprenticeship	0.05	0.80	0.95
Year of birth	-0.0003	0.0211	0.99
Father's occupation: Agriculture only Services only Agriculture and Manufacturing	-3.37 -0.94 -1.89	0.83 1.20 1.12	0.0001 0.43 0.09
Miscellaneous ²	-2.09	1.30	0.11
Intercept	14.25		
R^2	0.328		
F	7.08		
n	187		

Notes: ¹The excluded category for occupational analysis is "manufacturing only."

For definitions of all other variables, see appendix. Method of estimation was ordinary least squares.

²"Miscellaneous" includes the following combinations of sectors: agriculture and services; manufacturing and services; agriculture, manufacturing and services.

a sorry one, likely to throw them prematurely upon the mercy of the cold world outside their homes, would come as no surprise to readers of Charles Dickens; the result obtained here appears to indicate that for those in the sample the father's death tended to break up the residential unit of the family. 15

The effect of the son's employment by the father prior to the son's departure from home is positive and highly significant statistically, indicating that sons who worked for their fathers remained home an average of more than four years longer than those who did not. It should be noted that the negative coefficient associated with a father in agriculture cancels most of this effect, however, so that a large net impact is present only for ${f s}$ ons of fathers in the other two sectors (3.4 years for fathers in the service sector, and 4.3 for fathers in manufacturing). The direction and large size of the effect of home employment for sons of fathers employed in the nonagricultural sectors are consistent with several effects noted in the discussion earlier in this paper. First, the son's employment by the father could have raised the family's income sufficiently to enable the son to remain at home considerably longer than he would have in the absence of this employment. Second, a son's employment by his father might in many cases have contained a large training component. This variable would then indicate continuing investment by the family in the child, raising the advantages to him of remaining at home. This is also consistent with the differential estimated effects of the fathers' occupational categories, for the men in this sample who grew up on farms left their parents considerably earlier than sons of fathers employed in the other sectors; a son growing up on a farm in nineteenth-century New England would have had to leave home to gain access to the training and work experience that would help make him a

successful manufacturer. A third possible source of the effect is that the ability of the father to offer the son a job could have been positively correlated with the father's wealth. Fathers with larger businesses might have been better able to offer employment to their sons, and consequently this variable might serve in part to identify wealthier families. The higher mean age of their sons at leaving home would then be consistent with the view that the retention of children at home is a normal good, with age at leaving home positively related to family wealth. Although the impact of each of these effects cannot be identified from the evidence available here, they are not mutually exclusive.

Another variable with a large positive impact on the age at leaving home is that of the child being employed locally but outside the family prior to leaving home. Sons who had held such jobs left home on average more than $2\frac{1}{2}$ years later than those who had not. That children who found local employment tended to remain at home longer than those who didn't points to the probable importance of the contribution of the child to the family's income as a factor in keeping the child at home.

Sample members whose first job away from home was in the employ of a relative left home an average of more than $2\frac{1}{2}$ years earlier than others. This is consistent with the presence of some nepotism in hiring practices, as employers might have been willing to offer jobs to relatives at younger ages than to other workers. For some youths the extended family therefore provided employment, and often also a place of residence, that constituted a status intermediate between living at home and independence as an adult. Not surprisingly, this was much more likely for children whose fathers had died, as 29 percent of those whose fathers had died prior to the son's departure from home found their initial employment away from home with a

relative, compared to only 9 percent of those whose fathers were living when the son left home. 17 The extended family therefore appears to have provided insurance to a significant extent. Yet the large estimated effect of initial employment by a relative on the age at leaving home does not derive primarily from cases in which sons moved to the care of relatives after the deaths of their fathers. This is apparent from Table 4, which presents the results for a similar regression estimated for the subsample of individuals who left home before the deaths of their fathers. The estimated coefficients for nearly all the variables remain similar to those of Table 3; of particular interest here is that the coefficient obtained for the effect of employment by a relative upon first leaving home indicates that on average this was associated with a departure from home of still more than two years earlier than otherwise. The economic effect of the extended family was therefore not limited to cases in which sons were forced to leave home by the deaths of their fathers. 18

Sample members who attended boarding schools at some time before leaving home eventually left home an average of nearly two years later than others, while those whose first move away from home was to attend school did not leave home at an age significantly different from others. There is abundant evidence that basic education in the early nineteenth century was commonly obtained by youths in the time they spared from work. Van Slyck's biographies frequently include such statements as: "His father was a blacksmith, and Charles was, in early life, called upon to assist him in the shop, meanwhile attending school at irregular intervals," and: "His father was a small farmer, and Loring assisted him on the farm, attending school, meanwhile, a few months in the winter." Yet at a time when schooling was typically obtained locally at minimal cost in terms of both cash

TABLE 4

REGRESSION RESULTS, VAN SLYCK SAMPLE
DEPENDENT VARIABLE: AGE AT LEAVING HOME (Years)

Independent variable	Estimated Coefficient	Standard Error	Sig nif icance Level
Employed by father while at home	3.62	1.05	0.0007
Employed by non-family member while at home	1.90	0.75	0.01
Employed by relative in first job away from home	-2.20	1.01	0.03
First move to school	-0.55	1.07	0.61
Attended boarding school before final departure from home	1.94	0.91	0.03
Apprenticeship	-0.27	0.85	0.75
Year of birth	-0.0054	0.0217	0.80
Father's occupation: Agriculture only Services only Agriculture and manufacturing Miscellaneous	-3.18 -1.45 -1.92 -2.57	0.85 1.23 1.15 1.34	0.0003 0.24 0.10 0.06
Intercept	21.65		
R^2	0.234		
F	4.27		
n	166		

Notes: The sample for this regression was restricted to sons whose fathers were alive at the time of the sons' departure from home.

Source: See Table 1.

expenditures and time costs, those families that did go to the expense of sending their sons away to academies or colleges for formal education were probably members of the wealthier segment of society; while some of the biographies mention attendance only at small schools near home, a number of the subjects attended such schools as the academies at Andover and Worcester, and such colleges as Brown, Dartmouth, Harvard, Princeton, and Yale. That attendance at boarding schools tended to increase the age at leaving home for some might therefore point to one way in which greater family wealth caused a later departure from home.

Several other independent variables yield insignificant and generally small coefficients. The lack of effect of apprenticeship on the age at leaving home might be due to the increasing informality of that institution in the nineteenth century, as a number of sample members served terms of only two or three years rather than the traditional seven; these shorter periods of training apparently did not significantly disrupt the timing of the child's departure from home. On the year of birth of the subjects, included to check for a possible secular trend in the age at leaving home, does not indicate the presence of significant change over time.

V. Conclusion

Knowing when children departed from their parental homes in the past, and what variables influenced the timing of this departure, is important to historians and economists for a number of reasons. This paper has focused on the departure from home from an interest in understanding when and why individuals became independent actors in determining their own geographic mobility. The paper first suggested some elements of an economic approach to the determination of the age at leaving home. A data set drawn from

short biographies of New England manufacturers collected in the mid-nine-teenth century was then used to provide information both on the typical age at which those in the sample left their parental homes and on some economic and demographic correlates of this age.

The empirical results obtained from this sample do appear to suggest a coherent view of the process by which children left home in the early nineteenth century. The age of departure was concentrated in the late teen ages and early twenties, as the sample median age was 18 years, and four-fifths of those in the sample left home between the ages of 14 and 24. Those with living fathers, and those who worked prior to leaving home, tended to remain at home longer than others; those whose first jobs outside the home were in the employ of relatives tended to depart earlier. These effects appear to be consistent with an economic analysis in which the family's retention of its children within the relevant range of ages is considered as a normal good; although measures of family wealth or income are not available in the data set analyzed here, the most important variables in the empirical results appear to represent potentially significant influences on either family income or the opportunity cost of the child's retention at home.

It should of course be recognized that the results obtained here cannot eliminate some other possible interpretations of the relationships observed in the sample. Yet they do cast doubt on some. For example, it might plausibly be argued that a number of the effects that appear in Tables 3 and 4 were consequences, rather than determinants, of the length of a child's stay at home; thus perhaps the longer children remained at home, the greater the likelihood that they would work locally, either for their parents or others, and the more likely they would be to attend boarding

school before finally leaving their families. Yet children who stayed home longer would also have been more likely to depart after the deaths of their fathers. That Table 3 shows the opposite to have been the case suggests that the correlations observed here are not simply the consequences of differences in the duration of children's residence with their parents, but do point to some underlying economic influences on those durations.

As noted earlier, the degree to which results from this sample can be generalized to other groups remains to be determined by future research. One interesting piece of comparative evidence can be offered here. The distribution of the age at leaving home for the sons of farm families in two rural New York counties in the early twentieth century is presented in Table 5. The New York distribution has a considerably higher central tendency than that shown in Table 2 for the Van Slyck sample, with its median age of 21 three years greater than the median age of 18 found for the earlier sample. The later distribution is also more skewed toward higher ages, as more than a quarter of the New Yorkers had not left home by the age of 30, compared to less than 1 percent of Van Slyck's subjects. These contrasts are intriguing, for they not only call attention to the possibility that the New England manufacturers left home on average earlier than others, but they also serve to point out that the industrialists may have been unusual in that all had left home by early adulthood.

The considerable differences between these samples in time and place make it unwise to place much weight on this comparison. Yet the men who pioneered the American industrial revolution may in fact have differed from their less successful contemporaries as much in their early migration and labor market experiences as in their later careers. More research on the

TABLE 5

DISTRIBUTION OF AGES OF MALES AT LEAVING HOME, JEFFERSON AND TIOGA COUNTIES, NEW YORK, 1920

Age	Number	Cumulative Percentage
15	5	2.3
16	7	5.5
17	12	11.0
18	37	28.0
19	3	29.4
20	32	44.0
21	23	54.6
22	9	58.7
23	3	60.1
24	5	62.4
25	8	66.1
26	1	66.5
27	3	67.9
28	2	68.8
29	3	70.2
30-34	12	75.7
35- 39	5	78.0
40-44	17	85.8
45 +	31	100.0
Total	218	
Median Age	21	

Source: E.C. Young, <u>The Movement of Farm Population</u>, (Ithaca, N.Y.: Cornell University Agricultural Experiment Station, 1924), Bulletin No. 426, Table 40, pp. 36-7.

early lives and careers of this as well as other groups can help to establish what patterns were typical in the past, and how the age at leaving home was related to other aspects of people's lives.

FOOTNOTES

I am grateful to Andrew Abel, Gary Becker, Stanley Engerman, Robert Fogel, Robert Gallman, Richard Hellie, Charles Kahn, Joseph Kett, Morgan Kousser, David Lam, Daniel Levy, Robert Michael, Douglass North, Walter Oi, Jonathan Pritchett, Sherwin Rosen, Theodore W. Schultz, Daniel Scott Smith, Peter Temin, Robert Topel, James Walker, and Harry Watson for suggestions and discussions of the issues treated in this paper; none bears any responsibility for its contents. I am also very grateful to Joseph Kett for bringing Van Slyck's biographies to my attention as a source of evidence for this investigation. Brendan Henry and David Augustin provided capable research assistance. Financial support for the research was provided by the University of Chicago and an Alfred P. Sloan Research Fellowship. Earlier versions of the paper were presented at a meeting of the Program on the Development of the American Economy of the National Bureau of Economic Research in Cambridge, and at seminars at the University of Chicago, the University of Michigan, the National Opinion Research Center in Chicago, and Washington University.

In his recent survey of family history, Michael Anderson commented that "leaving home to go into service, setting up in lodgings, living with kin, and continuing to live at home with parents can be seen as alternatives for young people in the early stages of the life cycle. One of the problems for future research is to try to discern who `chose' which option and why;" Approaches to the History of the Western Family, 1500-1914 (London: Macmillan, 1980), p.26. For examples of historical studies that discuss the age at leaving home, see Richard Wall, "The Age at Leaving Home," Journal of

Family History, Vol. 3, No. 2 (Summer, 1978), pp. 181-202; and Michael B. Katz, Michael J. Doucet, and Mark J. Stern, The Social Organization of Early Industrial Capitalism (Cambridge: Harvard University Press, 1982), Chapter 7. Other recent economic treatments of the age at leaving home include Marjorie McElroy, "The Joint Determination of Market Work and Household Membership of Youth," (unpublished paper, University of Illinois, 1982); Robert T. Michael, "Youths' Independence from Parents: Very Preliminary Evidence," (unpublished paper, University of Chicago, 1982); Julie DaVanzo and Frances E. Kobrin, "Leaving the Nest and the Transition to Adulthood," (unpublished paper, Rand Corporation, 1982); and Claudia Goldin and Donald O. Parsons, "The Adolescent, Intrafamily Relations, and the Industrial Revolution," (unpublished paper, University of Pennsylvania, no date).

²For a discussion of the importance of continuing parental economic assistance to children after the departure of the latter from home in nineteenth-century New England, see Hal S. Barron, <u>Those Who Stayed Behind:</u>
Rural Society in Nineteenth-Century New England (Cambridge: Cambridge University Press, 1984), pp. 99-109.

³For example Lee Soltow and Edward Stevens found few boys ten through nineteen living away from home and attending school in the midnineteenth century United States; The Rise of Literacy and the Common School in the United States: A Socioeconomic Analysis to 1870 (Chicago: University of Chicago Press, 1981) p. 120. This is implicit in such statements as Ulysses S. Grant's recollection that because of his father's great concern that his children receive an education, Grant "never missed a quarter from school from the time [he] was old enough to attend till the time of leaving home;" quoted in <u>ibid.</u>, p. 93.

⁴For some evidence on the apparent substitution of the training of children by their fathers for formal education in nineteenth-century Philadelphia, see Ali Saad, "Intergenerational Occupational Mobility in Nineteenth Century America," (dissertation in progress, University of Chicago).

⁵For evidence on the positive association in the nineteenth century between children's school attendance and family wealth or income, see Soltow and Stevens, The Rise of Literacy and the Common School in the United States, pp. 128-30, and David L. Angus and Jeffrey E. Mirel, "From Spellers to Spindles: Work-Force Entry by the Children of Textile-Workers, 1888-1890," Social Science History, Vol. 9, No. 2 (Spring 1985), pp. 123-43.

 $^{6}\mathrm{This}$ discussion assumes that the earnings of a child living at home will be spent in the same way as other family income. This assumption appears consistent with the nature of the nineteenth-century family; thus Joseph Kett stated, concerning nineteenth-century families, that "in the quasi-contractual relationship between father and sons, the obligation to work lay heavily on the son;" Rites of Passage: Adolescence in America, 1790 to the Present (New York: Basic Books, 1977), p. 29. In some cases the wages of children employed outside the family were paid directly to the parents; the biography of Philip Corbin, one of the subjects of this investigation, notes that "From the age of fifteen to that of nineteen years, he was employed in farm-labor away from home, performing the full work of a man, and earning a man's wages, which were, however, received by his father;" J.D. Van Slyck, New England Manufacturers and Manufactories (Boston: Van Slyck and Company, 1879), Vol. 1, p. 187. Different assumptions about the control and expenditure of children's income are of course possible, not only for the period during which the child remained at home, but also for that after his departure; indeed, the passage just quoted is ambiguous on the question of where Corbin was actually living during the period in which his wages were being paid out to his father.

⁷Jacob Mincer, "Family Migration Decisions," <u>Journal of Political</u> <u>Economy</u>, Vol. 86, No. 5 (October 1978), pp. 749-73. Mincer explicitly considers only husbands and wives; the following discussion extends his analysis to children.

⁸The definition employed here, as in the balance of this paper, is that the child's parental home is that of the surviving parent if either parent dies before the child's departure from his parents.

9(Boston: Van Slyck and Company, 1879), 2 volumes.

10 Ibid., Vol. 1, Introduction; Kett, Rites of Passage, p. 24. In some cases Van Slyck mentions the use of journals or other memoirs provided by the subjects of biographies. Some of the subjects were dead at the time Van Slyck wrote, and in these cases his information appears to have come from a variety of sources, including relatives, business associates, and papers of the subjects.

Van Slyck's compilations appear to have been quite accurate. Of the first 73 principal subjects named in the Table of Contents to Volume I, 22 are listed in the <u>Dictionary of American Biography</u> (New York: Charles Scribner's Sons, 1928). In all 22 cases, the month and year of birth are the same in both sources. The same is true for date of death for nine of the ten cases of subjects who had died prior to the publication of Van Slyck's books; in one case the date of death differed by two years. The state named as the place of the subject's birth was the same in both sources in all cases.

11 Sample members appear to have married at ages similar on average to those of other men in New England at the time. The average age at first marriage for Massachusetts males was 26 years in the middle of the nineteenth century; Maris A. Vinovskis, Fertility in Massachusetts from the Revolution to the Civil War (New York: Academic Press, 1981), pp. 48-49.

12The figure of 49 percent is an upper bound obtained by including all men listed jointly as farmers together with any other occupation as engaged in agriculture. On the sectoral composition of the national labor force, see Stanley Lebergott, Manpower in Economic Growth: The American Record Since 1800 (New York: McGraw Hill, 1964), p. 510.

13 Vinovskis, <u>Fertility in Massachusetts from the Revolution to the Civil war</u>, Table E.8, p. 220. It should be emphasized that virtually all of the fathers of sample members described here as manufacturers were in fact engaged in artisanal crafts on a small scale.

14 A second version of the same equation was estimated, for which ages at leaving home greater than 21 were recoded and set equal to 21. The motivation for this lies in the interest of this investigation in the age of independence of the child for purposes of determining such actions as migration; it might be argued that a child who remained in the parental home past majority had nonetheless probably become independent of his parents in this respect, and remained in the parental home for different reasons, and with different implications, than did younger children. Limiting the dependent variable to a maximum of 21 allows a comparison of the results to the unrestricted version, reported in Table 3, to check whether the behavior of those children who did remain with their parents after reaching majority significantly affected the results obtained here. The two versions of the equation estimated produce results that are the same qualitatively, with a

general tendency for the absolute magnitudes of coefficients to be somewhat larger in the first, unrestricted version. The differences in magnitude are not great, however, and no separate discussion appears necessary.

been present in a significant number of cases, the net impact might be expected to have been to raise the variance of the age at leaving home for sons of deceased fathers above that for sons of living fathers, for the father's death might have caused some sons to leave home very young - those whose homes were broken up by the father's death - and caused others to stay home considerably longer than otherwise - those who took over family businesses. The net impact on the mean of the distribution would depend on the relative frequency of these two effects. A comparison of the two distributions indicates that the mean age at leaving home for sons of deceased fathers (14.7) was considerably below that of sons with living fathers (18.3), and that there was some difference between the respective standard deviations (5.9 and 4.4). The father's death therefore appears to have lowered the mean of the age of sons at leaving home and raised its variance.

16 Other studies report a positive relationship between the age of children at leaving home and family wealth; Michael B. Katz and Ian E. Davey, "Youth and Industrialization in a Canadian City," in John Demos and Sarane Spence Boccock, eds., <u>Turning Points: Historical and Sociological Essays on the Family</u> (Chicago: University of Chicago Press, 1978), p. S102; Katz, Doucet, and Stern, <u>The Social Organization of Early Industrial Capitalism</u>, p. 262.

¹⁷The correlation of 0.28 between the father's death and the son's initial employment by a relative is significant at the .0001 level. As

might be expected, the probability that a son whose father had died before the child left home would go to work for a relative declined considerably as the child's age increased: whereas 58 percent of such sons who left home before the age of 14 went to work for relatives, only 9 percent of those who left home at 14 or older ages were first employed by relatives.

18 Joseph Kett stressed this importance of the supervision of other relatives in addition to parents in the early careers of Van Slyck's subjects, noting that "dependency and residence at home were not interchangeable concepts before the middle of the 19th century;" Rites of Passage, p. 27.

¹⁹Van Slyck, <u>New England Manufacturers and Manufactories</u>, Vol. 1, pp. 96, 178. On the seasonality of school attendance in the mid-nineteenth century, and the relationship between the timing of children's work and attendance, see Soltow and Stevens, <u>The Rise of Literacy and the Common School in the United States</u>, pp. 110-11, 121-22.

Lawrence A. Cremin, American Education: The National Experience, 1783-1876 (New York: Harper & Row, 1980), pp. 342-52; Kett, Rites of Passage, p. 26.

²¹More elaborate regression specifications using additional independent variables designed to test for the presence of differences in the age at leaving home by birth cohort failed to reveal any significant or consistent pattern.

It might be noted that a similar regression equation was also estimated after adding one other variable, the son's birth order. That variable yielded a small and insignificant coefficient, and its inclusion

did not have important effects on the estimated values of other coefficients. Inclusion of birth order reduced the sample size to less than 70 observations; the results obtained are not presented here.

22_{For} another study that indicates ages at leaving home similar to those shown in Table 5, for a different rural New York county a decade later, see W.A. Anderson, Mobility of Rural Families, II: Changes in Residence and in Occupation of Sons and Daughters in Rural Families in Genesee County, New York (Ithaca, N.Y.: Cornell University Agricultural Experiment Station, 1935), Bulletin No. 623, Table 4, p. 6. It might be noted that inclusion in the tabulation presented here as Table 5 was premised upon having left a farm in one of the two counties studied by Young; like Table 2, an age at leaving is therefore given for everyone included.

Appendix: The Coding of the Van Slyck Biographies

The quantitative evidence for this investigation was drawn primarily from the biographies of New England manufacturers contained in J.D. Van Slyck, New England Manufacturers and Manufactories, 2 volumes (Boston: Van Slyck and Company, 1879). This appendix provides a listing of the variables on which information was taken from the biographies, and a description of the practices followed and definitions used in coding them.

All principal subjects of chapters were included in the sample analyzed if information on a reasonable number of variables was available in their biographies; missing information on particular variables obviously causes a number of these to be omitted from parts of the quantitative analysis of this paper. In addition, other individuals mentioned in the course of descriptions of manufacturing firms have been included in the sample whenever information was available on the age at which they left home; varying amounts of other information about these individuals of course again means that some are omitted from the sample for particular empirical specifications.

The variables coded from the biographies are the following:

- 1. Year of subject's birth: coded as the last three digits of the year.
- 2. Nativity of subject's parents: coded as 0 for parents born in America, and as 1 for foreign-born parents. Foreign-born subjects were excluded from the sample.
- 3. Age of subject at leaving home: coded as the age at which the subject left his parents, or his surviving parent if only one was alive. Whenever possible this variable refers to the final departure from home, for those

cases in which children had left and returned. Therefore a child who went away to school and then returned home directly from school was not deemed to have left home for the purposes of coding this variable. If a child went away to school but did not return home afterward, the age at the time of his departure to school was taken as the age at leaving home. These conventions are aimed at distinguishing between departures from home that indicated the child would subsequently be an independent agent, for example for purposes of determining whether to migrate, and those in which the child remained tied to the parental household, with a return to his parents assumed at the time he left. Attendance at school appears to account for most cases that fall into the latter category.

4. Father alive when subject left home: coded as 0 if father was dead when child left home, or as 1 if father was alive. Orphans were excluded from the sample.

5-7. Father's occupation:

- 5. Agriculture: coded as 1 if the father was a farmer, or as 0 if he was not.
- 6. Manufacturing: coded as 1 if the father engaged in manufacturing, or as 0 if he did not.
- 7. <u>Services</u>: coded as 1 if the father was engaged in commerce or a profession, or as 0 if he was not.

In coding variables 5-7, fathers' occupations were not constrained to be in only one of the three categories; a father who operated a farm and had a shed on it where he did carpentry for a local market would be coded as engaged in both agriculture and manufacturing.

8. Subject employed by father or family before leaving home: coded as 1 if the biography mentioned that the child had worked for his father or

another family member while at home, and as 0 otherwise. The one exception to this was for the childred of farmers, for whom this variable was always coded as 1. The biographies commonly mention that children who grew up on farms worked for their parents on these farms from early choldhood. Although such mentions were omitted in a small number of cases, children of farmers are assumed here always to have done some work on the farm while they remained at home. For some evidence consistent with this assumption, see Lee Soltow and Edward Stevens, The Rise of Literacy and the Common School in the United States: A Socioeconomic Analysis to 1870 (Chicago: University of Chicago Press, 1981), pp. 110-11, 121-22; Max George Schumacher, The Northern Farmer and His Markets During the Late Colonial Period (New York: Arno Press, 1975), pp. 40-41, 48-49.

- 9. <u>Subject's first move to school</u>: coded as 1 if the subject's departure from home was made in order to attend school, and as 0 if it was not. This variable was coded as 1 only if the attendance at school was not followed by an immediate return to the parental home, or as 0 if it was immediately followed by such a return; for the reasons for this practice, see the discussion of variable 3, above.
- 10. Attended boarding school before final departure from home: coded as 1 if the subject attended school away from home and returned home immediately thereafter, and as 0 otherwise.
- 11. Apprenticeship: coded as 1 if the subject is described as having entered or served an apprenticeship, or as 0 otherwise.
- 12. Subject employed by non-family member while at home: coded as 1 if the subject worked for an employer other than a member of his family before leaving home, or as 0 otherwise.

- 13. Subject first employed by a relative after leaving home: coded as 1 if the subject's first employment after leaving home was for a relative, or as 0 if it was not.
- 14. <u>Birth order</u>: coded as 1 if the subject was the oldest son in the family, or as 0 if he was not.
- 15. Age at first marriage. The information on this variable available in Van Slyck's two volumes was supplemented through the use of the <u>Dictionary of American Biography</u> (New York: Charles Scribner's Sons, 1928) and the National Cyclopaedia of American Biography (New York: James T. White & Co., 1898) for sample members listed in the latter two sources.