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6 Inheritance on the Maturing Frontier: Butler County, Ohio, 1803–1865

William H. Newell

6.1 Introduction

In his review of Gagan's paper on inheritance patterns in nineteenth-century Ontario, McInnis observes that

> while there is a long and well-established tradition in European history of making inheritance central to analyses of social, economic, and demographic change, inheritance has played a much smaller role in American historiography. There are some descriptions of inheritance patterns in Colonial New England but only the most scattered references to nineteenth century midwestern practices. There seems to be a fairly wide presumption that an egalitarian, partible inheritance system was typical of the U.S., but the presumption is based only on very scattered evidence. (P. 142)

This study seeks to add to that evidence through an extensive micro study for Butler County, Ohio, of the evolution of prevailing patterns of testation and their underlying causes, for the 62 years from the county's formation in 1803 through the end of the Civil War.

The seminal work on inheritance in America is Philip Greven's *Four Generations*, a study of colonial Andover. Greven writes of his use of probate records, "My focus has been principally upon the problem of inheritance and the methods of transmission of estates, especially of

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land, from one generation to the next. By examining patterns of inheritance from generation to generation, it is possible to see how men used their land for the purpose of perpetuating their families and providing for the settlements of their offspring" (p. 11). Greven concludes that a system of partible inheritance held during the seventeenth and eighteenth centuries through which fathers retained control over their sons by restrictions on their bequests of land in order to provide for themselves in their old age. He does not, however, identify distinct patterns of inheritance (other than to demonstrate that primogeniture was not found in colonial Andover), trace their evolution over time, nor identify their underlying causes.

A number of other scholars have mined the probate records of colonial America for evidence on patterns of testation. Lockridge also argues that a system of "partible descent" held in Massachusetts and Connecticut during the eighteenth century (p. 156). His emphasis is on the consequent division and redivision of landholdings which put economic pressure on subsequent generations that out-migration was unable to alleviate. The result, according to Lockridge, was increased age at marriage and increased social and economic inequality. Auwer's study of colonial Windsor, Connecticut, suggests an essentially partible system as well, though from her study of the wills of male testators only, she finds that "Daughters normally received their portions in 'movables' rather than land" (p. 142). Daniel Scott Smith, citing findings from Hingham, Massachusetts, wills, claims that one common pattern was for male testators to favor sons over daughters, a pattern he notes was not followed by female testators (p. 8). He specifically recommends that nineteenth-century Midwest wills be examined for comparison to colonial wills, since "I suspect women will have a more favorable status and make more real choices" (p. 15).

When one turns to the nineteenth century and further west to observe the evolving patterns of testation as the new frontier developed into settled agricultural regions, the empirical evidence becomes even more sparse. Easterlin bemoans the fact that "we have no studies comparable to Greven's for the nineteenth century—a research gap that badly needs to be filled" (p. 68). He puts together some impressionistic evidence in support of his hypothesis that parents reduced their fertility as the declining returns on their investment in the farm made it harder to leave their children with a start in life equal to their own (and his impression that sons received two to three times the legacy that daughters did), but Bogue questions his evidence: "The plain fact is, and I am sure Easterlin agrees, we know very little about the history of inheritance and intergenerational assistance within the farm population of this country. Did practices remain more or less as established by the early British settlers? Was the system in practice indeed one of more or less

equal multigeniture? Were there significant cultural differences in the assistance and inheritance patterns?" (p. 78). This study was designed to answer these questions as well as to test out the impression and hypothesis advanced by Easterlin.

There are, in fact, a handful of studies carried out earlier in the century of Midwest farm succession that draw on data as far back as 1860. Typical are publications of the Wisconsin Agricultural Experiment Station from the 1920s and 1940s that focus on the inheritance practices of Wisconsin farmers that allowed their farms to remain intact and within the family through several generations. Because of their exclusive focus on the farms themselves, these studies provide little insight into the question posed above. Similar research strategies were followed in the few studies published in the academic literature, such as economist George Wehrwein's "The Problem of Inheritance in American Land Tenure" and sociologist James Tarver's "Intra-Family Farm Success Practices." In his paper on Wisconsin farm families from 1848 to 1948, Tarver at least compares the homestead legacies of sons and daughters, finding that sons received the family farm in 902 out of 1307 cases. Unfortunately, he lumps the entire period together, ignoring any changes in farm inheritance practices, and has no information on the relative values of legacies within each will, nor on the socioeconomic characteristics of the testators from which to formulate hypotheses about the sources of the patterns. This study is able to provide such information.

More recently, inheritance research has focused on the role of ethnicity as a determinant of testation practices. Sonya Salamon's comparison of a German with an Irish community in East Central Illinois, for example, reaches back to their formation in the latter half of the nineteenth century. She finds sharply divergent inheritance patterns that she attributes to "historical ethnic values": partible inheritance for the Germans, de facto impartible for the Irish. The partible system was linked with reduced fertility after the first generation and declining farm size; the impartible with continued high fertility, stable farm size, higher out-migration, and celibacy. Kathleen Conzen finds a different but equally dominant pattern of land transfers—intervivos bequests of farms to sons as they reached marriageable age—in her micro study of St. Martin (Stearns County, MN) from the late 1850s through the 1920s. She attributes this partible (for sons) system to the interaction of abundant land and low settlement rates with traditional German values (even though those include impartible inheritance from some members of her community). Since these studies all focus on culturally homogeneous communities, one wonders how ethnic values related to inheritance fared in more culturally diverse settings such as Butler County, Ohio.

By far the most ambitious published study of nineteenth-century inheritance patterns is Gagan's analysis of 1500 estates probated in Peel County, Ontario, between 1840 and 1900. In his 1976 paper Gagan identifies three basic systems of inheritance:

> the perfectly partible system which involved the more or less equitable distribution of the estate among the surviving heirs, and the perfectly impartible systems which favored one principal heir to the exclusion of all other claims to the estate. The third system was a curious variation of the other two. In effect the estate was devised impartibly on one, but sometimes two principal heirs who in turn were legally obligated to satisfy out of their own inheritances, or other resources, the more or less equitable provisions made by the deceased for his remaining dependents. The farmers of Ontario employed all three systems, but it was the latter one which prevailed and in turn dictated the expectancies of the survivors. (p. 129)

The systematic linkage of virtually all archival records by the Peel County Project gives Gagan the opportunity to measure the association of inheritance patterns with a wide array of socioeconomic variables, though he chooses to focus his attention on occupation, family size and composition, wealth, and farm size. In his recent book, *Hopeful Travelers,* Gagan moves beyond the cross-sectional analysis of his paper to examine the changes over time in inheritance patterns and their correlates. He finds that after the first decade, when impartible inheritance was more and the "Canadian" (favored heir plus obligations) less prevalent, the relative importance of the three patterns remained stable throughout the rest of the period. The Canadian pattern, with farmers, extensive acreage, and large families as its primary correlates, Gagan calls Canada West's solution to "dividing the indivisible," the family farm (pp. 50–58). Gagan's study provides the most appropriate comparison available for this study of Butler County.

Evidence on nineteenth-century inheritance patterns for the East Coast is now beginning to appear. Mary Ryan's *Cradle of the Middle Class* includes some quantitative data on inheritance practices in Oneida County, New York, from its frontier days in 1790 to 1865. She finds that "simple equality" increased in both rural and urban areas from an average of 20% in 1798–1824 to 50% in 1845–65, while "unequal by age and sex" declined after the first period and "unequal by sex" declined after the second, but she does not search for the source of this dramatic change. She also observes that most farmers left land to each son and household goods to each daughter. While making no attempt to determine the extent of inequality in the legacies of daughters, she notes that "about one-third of the bequests to women were clearly of lesser value than their brothers' legacies." Beyond the startling trend in equal treatment, her study leaves one with more questions

than answers about the nature and determinants of inheritance practices in early Oneida County (presumably because the focus of her study is on the relation between family and community).

An unpublished dissertation by Toby Ditz on Weathersfield, Connecticut, and the surrounding agricultural communities from 1750 to 1820 provides a final point of comparison for Butler County. She finds that few daughters were excluded from land in the wills, varying from a high of 45% excluded in urban Weathersfield in 1772–74 to a low of 10% in the surrounding rural areas in 1820–21. Daughters consistently received legacies of smaller value than sons, though the proportions fluctuated widely between time periods and between rural and urban areas; in general, however, urban testators gave daughters higher proportions of the estate than did rural ones. She also finds that the "favored heir plus obligations" strategy labeled "Canadian" by Gagan was the rule in rural areas of Connecticut as well, with proportions varying from 50% to 62% of landed testators leaving their children with heavy obligations. The small sample size (less than 25 from any one time period and region) and the limited statistical analysis make her project more suggestive than definitive, but she does provide important quantitative evidence available nowhere else in the literature.

In sum, a review of the literature indicates a substantial need for a study from the Midwest on nineteenth-century inheritance patterns. Ideally, the study should provide time series data on inheritance and intervivos bequest patterns, including the value of each legacy, the sex and age of each legatee, and the extent of any obligations between legatees. It should correlate those patterns and their evolution with the socioeconomic characteristics of the testators. It should also provide time series data on such social and economic variables as age at marriage, fertility, land prices and availability, credit availability, tenancy, and out-migration so their evolving relation with inheritance can be evaluated. This study meets most, but not all, these criteria.

6.2 Inheritance Patterns in Butler County, Ohio

6.2 The County

The choice of the county was dictated primarily by ease of access to Miami University, but it proved fortuitous. The county boasts a complete set of will, deed, testamentary, tax, and inventory records. Probably because of its proximity to Cincinnati, it was settled earlier and more rapidly and its land was of higher value at midcentury than almost any other rural county in Ohio, so that the full effects of the transition from frontier to mature settlement can be observed before the Civil War. In addition, its agricultural lands were all settled at about

the same rate, planted with the same crops, and grazed by the same livestock. Its ethnic groups were scattered over the county: Germans, for example, the largest identifiable ethnic group, were distributed fairly uniformly across the county. And while the county was largely rural, it did include two small manufacturing cities with a combined population of over 9,000 in 1860, allowing some glimpses into rural/urban differences. In short, Butler County appears to be an appropriate unit of analysis for a study of inheritance.

6.2.2 The Data

The 1,151 wills filed in the county between 1803 and 1865 provide information on place of residence, sex, marital status, number and sex of children, signature literacy, the nature and extent of obligations between heirs, and the use of intervivos bequests, as well as the nature of each legacy. These wills were linked to deed, in-lot, out-lot, inventory, tax, and testamentary records to determine wealth and the value of each legacy, as well as to verify or complete the other information. In addition, the deed records provide data on land prices. Age, place of birth (hence ethnicity), and occupation were found by linking wills to manuscript censuses of population. Again, the census serves as a check on the information from the wills such as number of children. Finally, marriage records linked to the population censuses yield age at marriage, agricultural censuses provide land use data, and death records (available only for 1856–57) allow a comparison of characteristics of testators and intestators. (For example, testators, representing about 20% of all decedents in 1856–57 aged 40 or over, were older than intestators, and a higher percentage were male.) Most of these variables, and the data collection techniques underlying them, are discussed at length in my earlier article, "The Wealth of Testators and Its Distribution: Butler County, Ohio, 1803–65" so the discussion below is limited to data collected since that paper was written.

The largest ethnic group in the county was the Germans. Two categories of Germans were used in this paper, testators born in Germany and testators of clear German ancestry. Birth in Germany was determined largely from the population censuses, though several more were identified through the wills. German ancestry was imputed in addition through evidence from wills such as religion and spelling, and through independent identification of clearly German surnames by two German scholars. Since both categories yielded similar results, the later category is reported here since the observations are more numerous if more open to question.

Obligations of a favored heir to other heirs mentioned in the wills were divided into light and heavy. In practice the distinction rested largely on whether or not land was involved, since land was much more valuable than personal property for most testators.

Average family size was calculated for all married, widowed, or divorced testators in each time period. This measure has so many limitations as an estimate of completed family size that it must be viewed as a crude indicator of fertility at best. Since it includes young testators still in the family formation portion of the life cycle, it has a downward bias; since the proportion of young testators declined steadily (from 15% under 40 in the 1830s, to 10% in the 1840s, to 4% in the 1850s, with similar figures for testators in their forties), the bias is greater in the earlier decades. Consequently, fertility was probably higher than indicated, especially in the earlier decades.

Age at marriage was estimated for the county as a whole by linking a sample of marriages for each time period before 1850 with the 1850 manuscript census of population. For the midyear of each time period, couples were selected randomly from the marriage records by the first letter of the husband's last name and linked when possible to the 1850 census, using the wife's first name for confirmation. Sampling continued until 20 matches were achieved for each time period. In order to better approximate age at first marriage, couples were dropped from the sample when the husband was over 50 at the time of marriage. Then age at marriage was calculated separately for husbands and wives.

The data on testator's age have been extended from the previous study by linking testators to the manuscript census of population for 1840 as well as for 1850 and 1860. Since that census gives 10-year age categories instead of specific ages, testators were attributed the midpoint age of their category.

6.2.3 The Trends

Equality in the treatment of children by Butler County testators increased substantially during the first two-thirds of the nineteenth century. Figure 6.1 sets the trends in three measures of equal treatment. The most stringent measure, labeled *absolute equality,* refers to wills calling explicitly for identical treatment of all children. After an initial decline from less than 30% to more than 20%, absolute equality increased monotonically to almost 50% by the Civil War. The second measure—*rough equality*—refers to wills that left the children legacies that varied in monetary value by no more than 10%. Rough equality increased steadily from 10% in 1803–19 to 20% in the 1830s, while absolute equality declined and leveled off; then it slowly returned to its original level while absolute equality increased dramatically. The third measure, called here *presumptive equality,* refers to the occasional will that treated all children equally except for one or more children "already taken care of." This measure never accounted for even 4% of the wills. *Comprehensive equality,* or the sum of these three measures, increased consistently from 40% in 1803–19 to just over 60% in 1860–65. While absolute equality is of some interest for its embodiment

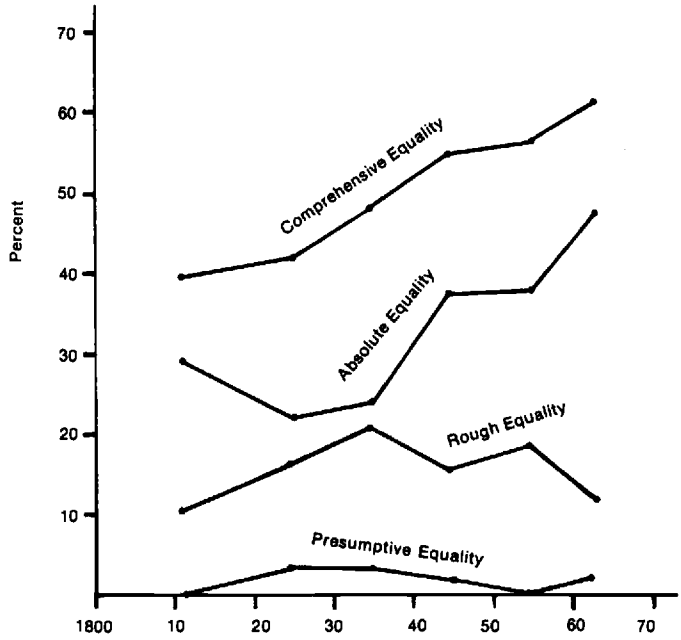

Fig. 6.1 Equality of treatment of children by Butler County, Ohio, testators.

of an ideal, comprehensive equality seems most relevant to a study of inheritance practices and will be the measure of equality employed in this study.

Figure 6.2 shows that the increase in equality was accompanied by an even more dramatic decline in the proportion of wills that favored sons over daughters. This study refers to such wills as *sexist*, not because the term necessarily best describes the attitudes underlying such wills, but because it draws attention to the historical roots of such behaviors in contemporary society. *Overall, sexist* wills declined in importance from nearly 40% in 1803–19 to 15% during the Civil War. The decline was most rapid at the beginning and end of the period, with the percentage leveling off just over 30% from the 1820s to 1840s.

Like the measure of equality used in this study, sexist treatment is the sum of three distinct inheritance patterns which were of roughly equal importance in antebellum Butler County. *Unigeniture*, where one or two sons were favored over daughters and other sons, declined from over 15% in 1803–19 to 5% in 1860–65, though it increased by a couple of percentage points between the 1820s and the 1840s. *Sexist equality* treated sons equally and daughters equally but favored sons over daughters. This pattern fluctuated between 12% and 15% until the 1860s,

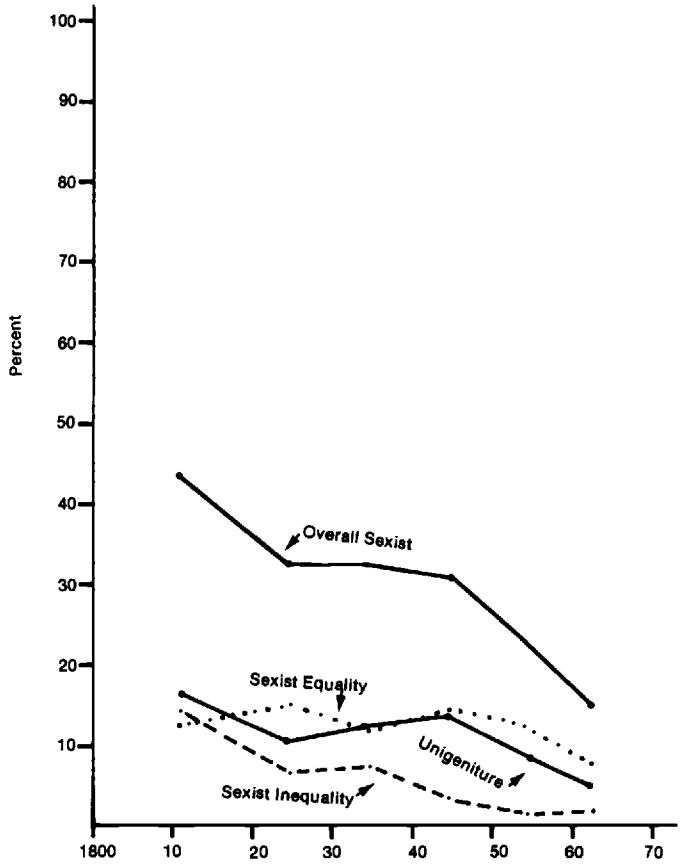

Fig. 6.2 Sexist treatment of children by Butler County, Ohio, testators.

when it dropped to under 8%. The last pattern, labeled *sexist inequality* here, refers to wills that favored sons over daughters while treating at least one sex unequally. This pattern exhibited the most pronounced decline. It started just under 15% in 1803–19, fell sharply to 7%–8% in the 1820s and 1830s, and fell sharply again to over 3% in the 1840s, leveling off between 2% and 3% by the end of the period.

Equal and sexist wills combined account for 80% of the testators from 1803 to 1865 who had two or more surviving children. Figure 6.3 shows that 14% of the remaining 20% wrote apparently idiosyncratic wills, with no discernible pattern to their legacies. Two other minor patterns are identified, one favoring younger children over older ones, the other favoring daughters over sons. These represent 2% and 4% of all wills, respectively, and they will be discussed commensurately in this study.

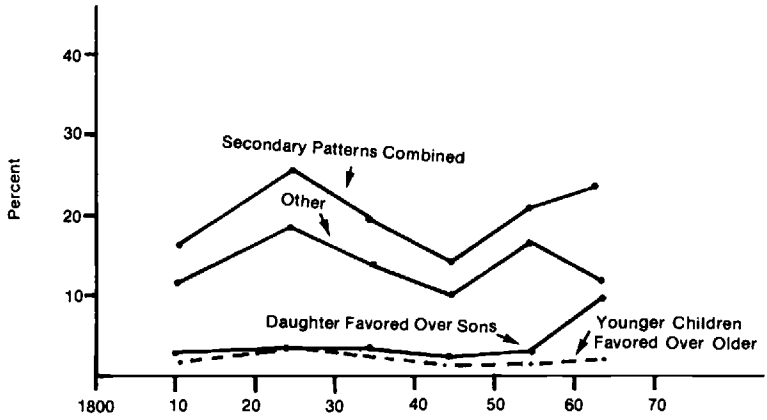

Fig. 6.3 Secondary inheritance patterns for Butler County, Ohio, testators.

6.2.4 Potential Limitations

Two potential limitations of the data raise the question of whether the observed increase in equality and decrease in sexism are statistical artifacts that do not reflect the actual behavior of testators or decedents in general. Since intervivos bequests are excluded from the analysis, one could argue that there might not have been any increase in equality because such bequests (which are seldom equal) might have increased in frequency (which they did). Alternatively, one might argue that since intestacy meant de facto equality, there might have been no increase in equality if there was a sufficiently large decrease in the proportion of decedents who died intestate.

The second question is most easily met. A sampling of decedents from the inventory records revealed in increase in intestacy. The proportion of decedents in the inventory records who wrote wills decreased from 36% (1804–9) and 38% (1815–16) to 26% (1825–26) and then to 20% (1835) and 22% (1845). (Sample sizes were between 50 and 80 for each time period.) If anything, the observed increase in testator equality actually understates the increase in equality for all Butler County decedents.

The first question is of potentially more concern, because intervivos bequests played an important role in the intergenerational transmission of wealth in some communities. However, their use appears to have increased only slightly during the period under study. The proportion of wills mentioning any intervivos bequest increases from 10% (1803–19), to 17% (1820s) and 14% (1830s) and 16% (1840s), and then to 21% (1850s), before the disruption of the Civil War (when it dropped to 8%). Even so, testators were under pressure to make mention of all legal

heirs in the will to forestall disgruntled heirs left out of the will altogether from contesting it (especially if the will stipulated equal treatment), and there is strong evidence from the other documents linked to the wills that all living children were indeed mentioned in the wills. With the exception of the presumptive equality category, where all other children are treated equal except the one or two "already taken care of," all other instances where intervivos bequests were mentioned caused the will to be categorized under some form of unequal treatment—in other words, the trend toward equality occurred *in spite of* the slight increase in intervivos bequests.

6.3 Sources of the Trends toward Equality and away from Sexism

6.3.1 Characteristics of Testators Related to Equality

There are a number of interrelated testator characteristics associated with equality and its increase set out in table 6.1. Also included is one characteristic, ethnicity, that is of interest precisely because it is not related to equality or its increase.

Wealth

Log-wealth (in 1967–69 dollars) was strongly and inversely associated with equality. Of the poorest testators, 66% chose equality compared with only 36% of the wealthiest ones, and the percentage declined systematically with increasing wealth. The contribution of wealth to the increase in equality over time, however, came not from the least but from the most wealthy. The wealthiest testators were much less likely (24%) than testators in general (40%) to write equal wills in 1803–19, but their tendency increased much faster than the average. By the end of the period, the wealthiest were as likely as testators in general to choose equality. Testators of intermediate wealth increased much more slowly, their proportion treating all children equally. And the least wealth had no tendency to increase their already high proportions who treated all children equally.

Occupation

Farmers dominated the occupations in largely rural Butler County, so it comes as no surprise that their proportions over time practicing equality followed closely the trend for all testators. Other occupations, however, started with much lower proportions practicing equality but increased them much more rapidly, so by the end of the period their percentage of equal wills was identical to that of farmers. Testators identified in the 1850 or 1860 population census as not in the labor force had levels half that of farmers: 33% versus 67% in 1860–65. Their

Table 6.1 **Contributions of Socioeconomic Characteristics of Testators to Increasing Equal Treatment of Children (% of Testators)**

Characteristics	*N*	1803–19	1820–29	1830–39	1840–49	1850–59	1860–65	1803–65
All testators	792	40	42	48	55	56	61	51
Log-wealth	792	+ + +	+ +					
0	64	100*	75	52	60*	54	77	+ + 66
0.1–0.9	37							59
1.0–1.9	357	40	38	43	57	51	57	47
2.0–2.9	323	24	31	53	52	61	60	53
3.0–3.9	11							36
Occupation	602					+ +		
Farmer	485	35	44	44	54	59	67	+ + 51
Other	80	80*	25	38	44	60	67	50
Not in LF	37	– –	– –	– –	0**	27	33	27
Residence	792							
Rural	690	39	42	49	55	58	62	51
Small town	49	[———— 27 ————]				44	56	43
City	53	[———— 69 ————]				56	62	62
Children	784	+ + +	+ + +	+ + +	+ + +		+ +	
2	105	63	100*	92	91	65	85	+ + + 80
3	119	67	86*	65	57	59	72	65
4	107	67*	12*	43	50	57	47	49
5–6	194	30	34	41	50	51	47	44
7+	250	21	28	38	41	50	50	38

Age	379				++	+		+++
Less than 30		−−	−−					
30–39	74	−−	−−	61	74	80	83	72
40–49		−−	−−					
50–59	43	−−	−−	50	43*	75	70	60
60–69	84	−−	−−	43	41	50	50	46
70+	178	−−	−−	44	33	50	46	44
Marital status	779					+++	+++	+++
Married	534	41	46	51	58	64	73	56
Widowed	245	38	31	42	46	43	45	42
Sex	792							
Male	708	40	42	48	54	58	65	61
Female	84	43*	33*	47	62	48	44	48
German	792		++		+			
Yes	49	20*	100**	40	100**	56	55	55
No	743	41	40	49	54	56	62	51
Literate	780							++
Yes	600	40	42	50	56	59	64	53
No	180	35	42	42	48	46	58	45

+ = .10 significance level.

++ = .05 significance level.

+++ = .01 significance level.

*$N \leq 5$.

**$5 < N < 10$.

proportion of equal wills may have increased over time as well, but the data are too scattered to tell.

Place of Residence

Much as farmers dominated the trend for occupations, rural testators dominated it for residency: the proportions over time of rural testators treating children equally was almost identical to the proportions of all testators. As best we can judge from the few nonrural testators prior to midcentury, the trends for small-town and city testators are quite distinct, from each other as well as from rural testators. Small-town testators started with a much lower proportion treating children equally, but the proportion increased more rapidly than for rural testators, ending at only a slightly lower level. City testators, on the other hand, simply maintained already high proportions. By midcentury, rural testators had caught up with them, and the proportions were nearly identical.

Children

There was a strong inverse relationship between the number of children and the proportion of testators treating them equally. Eighty percent of testators with only two children treated them equally, whereas only 38% of testators with seven or more children did, and the proportion declined steadily with the number of children. Over time, however, it was the testators with the largest families that contributed most to increasing equality, primarily those with five or more children. Testators with only two or three children showed no trend because they had attained at the beginning of the period proportions attained by testators with larger families only at the end of the period.

Age

There was also a strong inverse association between the age of testators and their tendency to treat children equally. Seventy-two percent of testators under 50 did so, while only 44% of those 70 or over did. The biggest differences were between testators over and under age 60. It was also the youngest that contributed most to the trend toward increasing equality: those under age 50 increased their proportion most rapidly, while those 70 and older showed no increase.

Sex and Marital Status

Married men dominated the trend toward equality. Widowed testators showed a much weaker trend, and female testators showed no clear-cut trend, even though the proportion of female testators in-

creased from 7%–8% at the beginning of the period to 18%–19% at the end.

Literacy

Literate testators were consistently and significantly more likely to treat children equally, but illiterate testators contributed as much to the trend toward quality as literate ones.

Ethnicity

Whether German-born or of German heritage, foreign born or a native of any particular region of the United States, or a native of Ohio, ethnicity and place of birth in general show no systematic relation to equal treatment of children, either cross-sectionally or over time.

Summary

Equal treatment of children in the antebellum wills of Butler County, Ohio, was systematically associated with wealth, age, number of children, and literacy (and perhaps with residency and labor force participation as well). Younger, literate testators with less wealth and fewer children (perhaps city dwellers in the labor force as well) treated children equally most often. Contributions to the growth in equality came disproportionately from the most wealthy and those with the most children (who caught up with the least wealthy and those with only a few children) and from the youngest (who widened the gap with the oldest). Nonfarmers and small-town testators may also have caught up with farmers and rural testators (even though they both contributed as well), though the paucity of data precludes any confidence in the trend. The least wealthy, those with small families, and perhaps city dwellers made no contribution—their proportions treating children equally were already high at the beginning of the period; the oldest made no contribution in spite of their low initial proportions treating children equally.

6.3.2 Characteristics of Testators Related to Sexism

Table 6.2 presents the same set of testator characteristics as in table 6.1 in order to compare the sources of the decline in sexism with the increase in equality. Not surprisingly, very similar correlates are found, both for the extent of sexism and for its decline over time. The few differences appear minor: occupations other than farmer contributed less clearly to the decline in sexism than to the increase in equality; and all ages contributed to the decline in sexism while younger testators were most responsible for the increase in equality. In general, it appears appropriate to treat both trends as part of the same process—the sub-

Table 6.2 **Contributions of Socioeconomic Characteristics of Testators to Decreasing Sexist Treatment of Children (% of Testators)**

Characteristics	*N*	1803–19	1820–29	1830–39	1840–49	1850–59	1860–65	1803–65
All testators	792	44	33	32	31	23	15	29
Log-wealth	792	+ + +						+ +
0 0.1–0.9	101	0*	8	29	20	19	8	15
1.0–1.9	357	44	34	35	30	25	17	32
2.0–2.9 3.0–3.9	334	54	44	31	33	22	15	29
Occupation	602				+ +			+
Farmer	485	52	40	40	32	24	21	34
Other	80	20*	42	31	11*	20	6	21
Not in LF	37	– –	– –	– –	100**	23	17	27
Residence	792							+ + +
Rural	690	45	33	31	32	24	16	30
Small town	49	[———— 40 ————]				22	19	27
City	53	[———— 19 ————]				6	10	11
Children	784	+ + +	+ + +	+	+ + +		+ +	+ + +
2	105	21	0*	8	9	13	0**	10
3	119	25	0*	15	14	24	12	18
4	107	11*	75*	30	33	20	26	29
5–6	194	64	34	41	32	26	5	32
7+	250	60	38	38	47	27	33	41

Age	379	– –	– –					+
Less than 30 30–39 40–49	74	– –	– –	25	21	13	0	18
50–59	43	– –	– –	29	43*	17	20	26
60–69	84	– –	– –	38	41	22	7	27
70+	178	– –	– –	44	45	24	29	33
Marital status	779							
Married	534	46	36	34	31	20	15	30
Widowed	245	38	28	29	32	26	14	27
Sex	792	+	+	+				+ +
Male	708	46	35	35	31	22	16	30
Female	84	14*	0*	16	31	26	6	18
German	792	+						
Yes	49	80*	0**	50	0**	25	18	31
No	743	42	34	31	32	22	14	29
Literate	780						+	
Yes	600	40	36	33	29	21	19	28
No	180	58	25	29	39	27	4	31

+ = .10 significance level.

+ + = .05 significance level.

+ + + = .01 significance level.

*$N \leq 5$.

**$5 < N < 10$.

stitution of equal for sexist provisions in wills—with a single set of underlying causes.

6.3.3 Characteristics of Testators Favoring Daughters over Sons

Female testators chose this pattern three times as often as men (p = .005). Professionals and small-town testators may have chosen it disproportionately as well, but the sample sizes are too small to tell with certainty. It is clear than when daughters were favored, it was because they got more than their share of land, as one might expect since land was the major form of wealth in largely rural Butler County. One final discovery is that "favored heir plus obligations" really meant "favored son plus obligations": daughters were almost never saddled with obligations to their siblings.

6.3.4 Interpretation

The first step in drawing hypotheses from the socioeconomic correlates of the substitution of equality for sexism is to disentangle the effects of wealth, age, number of children, and literacy, since these variables might well be expected to be correlated. (There are too few observations on testators not in the labor force or living in urban areas to determine their independent effects, even though they were undoubtedly interrelated with some of the other variables.) The statistical technique employed here is logistical regression analysis, which is preferable in this case to ordinary regression analysis since the dependent variable is dichotomous–either testators treated their children equally, or they did not.

The following equation presents the significant results of the logistic regression of wealth, age, number of children, and literacy on equal treatment of children.

$$\begin{aligned} \text{EQUAL} = &-0.13\,\text{NCLD} - 0.02\,\text{AGE} + 0.57\,\text{WRITE} + 1.88, N = 366 \\ &\quad (0.04) \qquad (0.0007) \quad (0.27) \\ &\text{Model chi square} = 39.6 \end{aligned}$$

The major result of the logistic regression analysis is that number of children (p = .003), age (p = .004), and to a lesser extent literacy (p = .04) all retain statistically significant effects on equal treatment while the effects of wealth are removed if either number of children or age are held constant.

Since data on age are restricted to after 1840 and to those testators who could be linked to the manuscript censuses of population, the logistic regression was rerun excluding age:

$$\begin{aligned} \text{EQUAL} = &-0.21\,\text{NCLD} + 0.31\,\text{WRITE} + 1.13, \qquad N = 762 \\ &\quad (0.03) \qquad (0.18) \qquad \text{Model chi square} = 68.4 \end{aligned}$$

While the significance of the overall model is increased, as in the literacy variable, by doubling the number of observations, the major finding remains the same: the apparent effect of wealth on equality of treatment merely reflects the effects of number of children or age; while age, number of children, and literacy all appear to have independent effects on equal treatment.

The modified portrait of a testator who was especially likely to treat his children equally is of a young literate testator with few children (possibly living in a city). Contributions to the increase in equality came disproportionately from the youngest testators (possibly nonfarmers in small towns) and from the wealthiest testators with the largest families.

The first portrait suggests the hypothesis that equal instead of sexist treatment of children may have been a progressive, more modern approach to dividing one's estate. The fact that wealthier testators with more children caught up with their less wealthy counterparts with few children suggests that this modern approach spread to more traditional sectors of the population during the antebellum period. Because the youngest testators (perhaps nonfarmers in small towns) increased their tendency toward equality substantially even though they started the period already more likely to treat children equally, the substitution of equality for sexism does not appear to be related to any one cohort; rather it seems likely that some factor had increasing effect on young adults over time. And the tendency, if it was real, of small towns to act like rural areas only more so—increasing equality even more rapidly than rural areas did—supports the hypothesis that the factor affecting young adults was connected with the transformation of the county from frontier to mature settlement. Small towns were intimately connected to the surrounding farms and are a hallmark of settlement, unlike cities with their base in manufacturing (whose inhabitants could be expected to adopt more modern values). In sum, the hypothesis extracted from these data is that some feature of the process of transforming the frontier into mature agricultural settlement, affecting everyone but young adults most strongly, caused traditional members of the population as well as increasing proportions of young adults to adopt a modern practice that was already well accepted by more progressive members of the population.

6.4 Patterns of Land Inheritance

In order to develop this hypothesis further, and to compare the findings of this study to any other study in the published literature, it is necessary to focus on the primary component of the wealth being transmitted through wills, namely, land. Figure 6.4, drawn from my

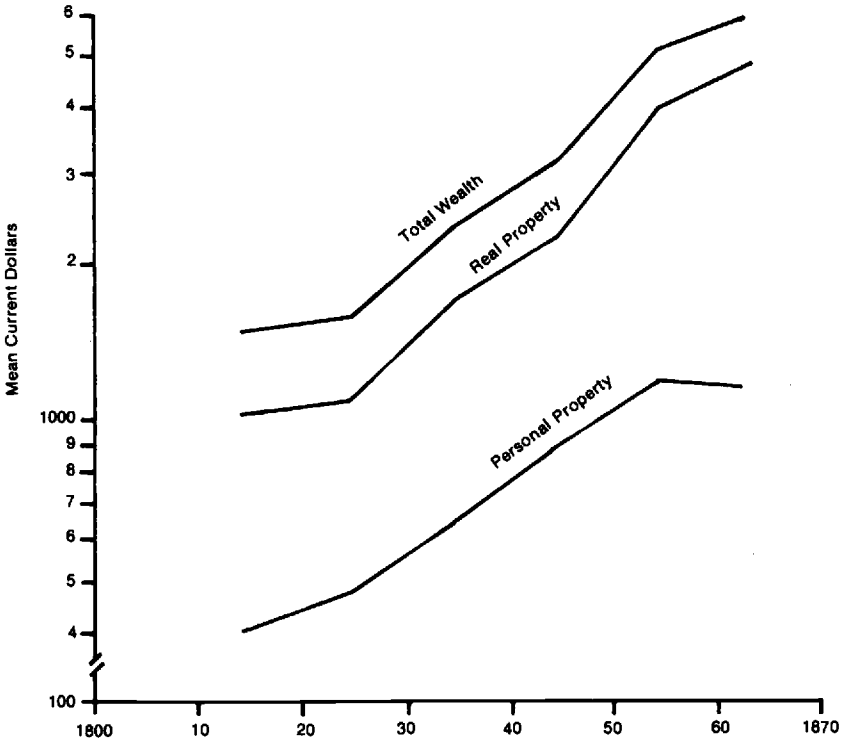

Fig. 6.4 Testator wealth and its components, Butler County, Ohio.

earlier study of wealth in Butler County, documents the importance of land in the total wealth of these testators. Three land inheritance patterns are examined, namely, equality, daughters preferred, and sons preferred. Two subpatterns—sons preferred but daughters included, and sons preferred and daughters excluded—are examined as well since the third pattern was the main alternative to equality and because there might be different attitudes underlying those subpatterns.

6.4.1 Equality

Table 6.3 presents data on the frequency of this pattern for the same time periods and testator characteristics used in the analysis of comprehensive equality. Equality in the distribution of land followed a trend so similar to that for comprehensive equality, as might be expected, that the analysis here is limited to differences in the testator characteristics associated with it.

Wealth, occupation, number of children, place of residence, sex, and marital status all had the same relations to land equality as comprehensive equality, both cross-sectionally and over time. The younger

Table 6.3 **Land Equality in the Wills of Butler County, Ohio, 1803–65 (%)**

Characteristics	*N*	1803–19	1820–29	1830–39	1840–49	1850–59	1860–65	1803–65
All testators	233	34	29	46	42	44	57	42
Log-wealth	233	+ + +						+
0–0.9	25	[——— 73*	———]	[——— 56	———]	[——— 47*	———]	57
1.0–1.9	101	36	31	43	45	40	40*	39
2.0–3.9	107	[——— 19*	———]	43	40	47	62	42
Occupation	188						+ +	+ +
Blue collar	12	[——— 40*	———]	[——— 42*	———]	58	90	50
White collar	18							56
Farmer	155	34	32	40	44	42	58	40
Not in LF	3	– –	– –	– –	0**	25**	0**	17**
Residence	233					+	+ +	+ + +
Rural	202	34	29	46	42	43	55	41
Small town	7	[——— 40**	———]	[——— 41*	———]	[——— 26*	———]	23*
City	24					[——— 81	———]	75
Children	232	+	+ + +	+ + +				+ + +
2	29	[——— 68	———]	[——— 82*	———]	[——— 58*	———]	69
3	32	[——— 38**	———]	[——— 58	———]	[——— 84	———]	51
4	32	[——— 21**	———]	[——— 46	———]	[——— 48	———]	43
5–6	57	[——— 28	———]	30*	44	39	50*	36
7+	79	21	33*	41	36	49	46*	37

(*continued*)

Table 6.3 (continued)

Characteristics	*N*	1803–19	1820–29	1830–39	1840–49	1850–59	1860–65	1803–65
Age	116			++	+			+++
< 50	30	– –	– –	67	57*	57*		61
50–59	15	– –	– –	[——— 44*	———]	[——— 57*	———]	50
60–69	32	– –	– –	[——— 45	———]	[——— 58	———]	52
70+	39	– –	– –	[——— 22	———]	[——— 37	———]	30
Marital status	231				+	+++		++
Married	184	36	35	42	47	52	59	44
Other	49	[——— 21*	———]	54	26*	29	53	34
Sex	233							
Male	225	34	31	46	43	45	57	43
Female	8	[——— 12**	———]	[——— 17**	———]	[——— 40*	———]	28*
Ethnicity	233							
Non-German	223	34	29	46	42	44	58	42
German	10	[——— 29**	———]	[——— 29**	———]	[——— 38*	———]	33
Literacy	228					+	+	+++
Illiterate	30	[——— 29	———]	[——— 31	———]	[——— 25*	———]	29
Literate	198	36	27	47	45	47	60	44
Comprehensive equality		+++	+++	+++	+++	+++		+++
Unequal	35	6**	19*	18	7**	6**	17**	11
Equal	196	83	55	80	86	80	93	81

\+ = .10 significance level.

++ = .05 significance level.

+++ = .01 significance level.

*$N \leq 5$.

**$5 < N < 10$.

testators most favored land equality as they did comprehensive equality, but the contributions to the increase over time in land equality came from the oldest, not the youngest testators. The literate were more prone than the illiterate to land equality as well as comprehensive equality, but only the literate (instead of both) contributed to its increase. And Germans were less likely than non-Germans to favor land equality, and they contributed less to its increase.

6.4.2 Daughters Preferred to Sons

Table 6.4 shows that, while this pattern was quite uncommon, its use was more prevalent for land than for wealth in general, and it increased modestly in popularity over the period. Observations on this pattern are so scattered that any of its socioeconomic correlates must be treated as tentative, but several interesting relationships emerge from the data.

The principal finding is that females favored this pattern three to five times more often than males, an even clearer difference than for total wealth. The less wealthy contributed more to the increase in this pattern, even though wealth was not correlated with its level. Testators not in the labor force, and to a lesser extent farmers, started to adopt it late in the period, but other occupations never did. Small-town testators favored it more than rural ones, increasingly so after 1830. Married testators consistently chose it less than the widowed, single, and divorced. And the illiterate contributed much more to its increase than the literate.

6.4.3 Sons Preferred to Daughters

Table 6.5 shows that this pattern was more popular than overall sexism by some 15 percentage points, but their trends were again very similar. Wealth, occupation, number of children, place of residence, sex, and marital status all have the same associations with this pattern as with overall sexism. Ethnicity, literacy, and age all have the associations with it expected from land equality, thought they are different than for overall sexism.

6.4.4 Sons Preferred and Daughters Excluded

Table 6.6 shows that this subpattern accounted for two-thirds of the preference of sons over daughters and all of its decrease. Occupation, residency, marital status, sex, and literacy were the same as for sons preferred. The associations for age and ethnicity were like those with sexism, though different from those with sons preferred. The catching-up process for larger families was completed earlier (by the 1850s); in fact, there was an insignificant reversal after 1850—smaller rather than larger families were more likely to choose this subpattern. The biggest

Table 6.4 **Daughters Preferred over Sons in Legacies of Land (%)**

Characteristics	*N*	1803–19	1820–29	1830–39	1840–49	1850–59	1860–65	1803–65
All testators	48	8*	4**	5*	8*	13	12*	9
Log-wealth	48					+ +		
0–0.9	5	[——— 0** ———]		[——— 6** ———]		[———27** ———]		11**
1.0–1.9	23	[——— 5** ———]		[——— 7* ———]		[———18 ———]		9
2.0–3.9	20	[——— 10** ———]		[——— 7* ———]		[——— 8* ———]		8
Occupation	33			+ +			+ + +	+ + +
Blue collar	0	0**	0**	0**	0**	0**	0**	0**
White collar	4	0**	0**	[———21** ———]		0**	0**	13**
Farmer	24	0**	0**	[——— 6 ———]		[——— 9 ———]		6
Not in LF	5	– –	– –	– –	0**	[———33** ———]		29**
Residence	48					+		+ + +
Rural	40	[——— 7 ———]		[——— 6 ———]		[——— 12 ———]		8
Small town	7	0**	0**	[———11** ———]		[——— 32* ———]		23*
City	1	0**	0**	[———12** ———]		0**	0**	3**
Children	48							
2	2	[——— 5** ———]		[——— 0** ———]		[——— 8** ———]		5**
3	9	[——— 15** ———]		[——— 16** ———]		[——— 13** ———]		14*
4	7	[——— 7** ———]		[——— 7** ———]		[——— 12** ———]		9*
5–6	16	[——— 10** ———]		[——— 5** ———]		[——— 17* ———]		10
7+	13	[——— 3** ———]		[——— 6* ———]		[——— 10** ———]		6

Age	25						+ +								
< 50	4	– –		– –		[———	3**	———]		[———	21**	———]			8**
50–59	3	– –		– –		[———	19**	———]		[———	0**	———]			10**
60–69	4	– –		– –		[———	3**	———]		[———	10**	———]			6**
70+	14	– –		– –		[———	6**	———]		[———	15	———]			11
Marital status	47			+ + +						+					+ + +
Married	25	[———	3**	———]		[———	6	———]		[———	8	———]			6
Other	22	[———	13**	———]		[———	11**	———]		[———	20	———]			15
Sex	48			+ +		+ + +							+ + +		+ + +
Male	39	[———	5*	———]		[———	6	———]		[———	11	———]			7
Female	9	[———	25**	———]		[———	33**	———]		[———	33**	———]			31*
Ethnicity	48														
Non-German	45	[———	7*	———]		[———	7	———]		[———	12	———]			9
German	3	[———	0**	———]		[———	0**	———]		[———	19**	———]			10**
Literacy	48	+				+ +				+			+ + +		
Illiterate	13	[———	3**	———]		[———	10**	———]		[———	33*	———]			13
Literate	35	[———	8*	———]		[———	6	———]		[———	10	———]			8
Comprehensive equality								+ + +		+ + +					+ + +
Unequal	41	11*		7**		8*		14*		21		25*			13
Equal	4	3**		0**		2*		0**		3**		0**			2**

+ = .10 significance level.

+ + = .05 significance level.

+ + + = .01 significance level.

*$N \leq 5$.

**$5 < N < 10$.

Table 6.5 **Sons Preferred over Daughters in Legacies of Land (%)**

Characteristics	*N*	1803–19	1820–29	1830–39	1840–49	1850–59	1860–65	1803–65
All testators	278	58	66	50	50	43	31	50
Log-wealth	278	+ + +						+ +
0–0.9	14	[——— 27** ———]		[——— 39* ———]		31*	0**	32
1.0–1.9	134	57	65	52	47	42	40*	52
2.0–3.9	130	70	73	52	51	46	29	51
Occupation	236							
Blue collar	12	[——— 60* ———]		[——— 42* ———]		33	10	50
White collar	10							31
Farmer	204	70	68	57	57	48	38	53
Not in LF	10	– –	– –	– –	[——— 60* ———]		33**	56
Residence	278							+ + +
Rural	255	58	67	48	51	45	33	51
Small town	16	[——— 60* ———]		[——— 67* ———]		[——— 42* ———]		53
City	7			[——— 25** ———]		[——— 19** ———]		22*
Children	277	+ + +	+ + +	+ + +				+ + +
2	11	[——— 26** ———]		[——— 18** ———]		[——— 33** ———]		26
3	22	[——— 46* ———]		25**	29	[——— 35 ———]		35
4	36	[———71 ———]		40*	54	[——— 39 ———]		48
5–6	84	56	68	67	50	[——— 42 ———]		54
7+	122	77	63	55	55	[——— 42 ———]		57

Age	132	− −	− −	+ + +				+ + +
< 50	15	− −	− −	29	43	[———21**	———]	31
50–69	12	− −	− −	33*	43*	[——— 43*	———]	40
60–69	26	− −	− −	53**	50**	[——— 32	———]	42
70+	79	− −	− −	77*	68*	49	46*	42
Marital status	276							
Married	202	57	65	54	47	38	34	49
Other	74	62	68	38*	61	51	26**	51
Sex	278			+	+			
Male	266	59	66	51	48	44	34	50
Female	12	[——— 62**	———]	[——— 50**	———]	[——— 27**	———]	41
Ethnicity	278							
Non-German	261	57	66	48	50	44	29	49
German	17	[——— 71**	———]	[——— 71**	———]	[———44*	———]	57
Literacy	276	+			+			+ +
Illiterate	61	75	57*	52	67	[——— 42	———]	59
Literate	215	52	69	49	46	42	33	48
Comprehensive equality		+ + +	+ +	+ + +	+ + +	+ + +		+ + +
Unequal	231	83	74	74	80	73	59	75
Equal	43	13	45	18*	14	17	7	18

+ = .10 significance level.

+ + = .05 significance level.

+ + + = .01 significance level.

*$N \leq 5$.

**$5 < N < 10$.

Table 6.6 **Sons Preferred and Daughters Excluded in Legacies of Land (%)**

Characteristics	*N*	1803–19	1820–29	1830–39	1840–49	1850–59	1860–65	1803–65
All testators	194	45	53	29	39	29	6	34
Log-wealth	194	+		++				+++
0–0.9	12	[——— 18** ———]		[——— 33* ———]		[——— 27** ———]		27
1.0–1.9	107	49	50	41	43	36	7**	42
2.0–3.9	75	48	67	[——— 28 ———]		25	6**	29
Occupation	162							
Blue collar	10	[——— 55* ———]		[——— 26** ———]		[——— 18** ———]		42
White collar	139	[——— 25** ———]						19*
Farmer	7	44	56	35	38	30	8**	36
Not in LF	6	– –	– –	;–	67**	42**	0**	39*
Residence	194							+++
Rural	180	45	53	30	41	30	9**	36
Small town	12	[——— 60** ———]		[——— 29** ———]		27*	0**	40
City	2							6**
Children	193							++
2	8	[——— 21** ———]		[——— 9** ———]		[——— 25** ———]		19*
3	15	[——— 31** ———]		[——— 21** ———]		[——— 23* ———]		24
4	24	[——— 43* ———]		[——— 32* ———]		[——— 21* ———]		32
5–6	57	[——— 51 ———]		40	44	[——— 17* ———]		36
7+	88	56	56	33	43	33	8**	41

Age	85											+
< 50	10	− −		− −		[——— 23* ———		]	[——— 14** ———		]	20
50–59	6	− −		− −		[——— 25** ———		]	[——— 14** ———		]	20
60–69	20	− −		− −		[——— 42 ———		]	[——— 23* ———		]	32
70+	49	− −		− −		[——— 44 ———		]	[——— 31 ———		]	37
Marital status	193											
Married	138	46		50		30		36	27		6**	34
Other	55	[——— 53	———	]	[——— 43	———	]	34	5*			37
Sex	194							++				
Male	183	45		53		31		38	[——— 23	———	]	35
Female	11	[——— 50*	———	]	[——— 50**	———	]	[——— 27**	———	]		38
Ethnicity	194											
Non-German	183	45		54		29		39	29		6**	35
German	11	[——— 43**	———	]	[——— 57**	———	]	[——— 25**	———	]		37
Literacy	193	++										
Illiterate	43	62		43*		[——— 38	———	]	32*		0**	41
Literate	150	39		57		31		38	29		7**	33
Comprehensive equality		+++		++		+++		+++	++			+++
Unequal	165	63		53		48		68	48		12**	54
Equal	26	13**		32*		8**		6**	12*		0**	11

+ = .10 significance level.

++ = .05 significance level.

+++ = .01 significance level.

*$N \leq 5$.

**$5 < N < 10$.

difference is that the inverse association with wealth was no longer apparent.

6.4.5 Sons Preferred but Daughters Included

Since only 84 testators chose this particular subpattern, characteristics associated with its adoption must be viewed with caution. According to table 6.7 there was no consistent trend in this subpattern, unlike the sharp downward trend in the other one. On the other hand, the association between wealth and preference to sons clearly came from this subpattern: there was a strong and consistent tendency for wealthier testators to adopt it. Beyond that, there may have been a weak tendency for literate testators, and those with larger families, to adopt it. The other associations of occupation, residency, and ethnicity with preference to sons were contributed by the other subpattern.

This subpattern is of considerable interest, however, because it permits a test of Easterlin's impression that sons received twice as much land as daughters. We have already seen, of course, that the major development in antebellum Butler County was the substitution of equal inheritance of land for preference of sons over daughters as the dominant pattern; and even within the preferential treatment of sons, the most common practice was to give all land to sons. Still, for the 15% of all testators who chose to give land to both but more to sons, it would be useful to know what proportions they chose. In fact, the results provide a limited but startling confirmation of Easterlin's hypothesis: for every time period, the mean, median, and modal proportion of land to sons fell between 66% and 68% (with an average standard deviation of 11 percentage points). Those few testators who chose this pattern may well have been motivated by a sense of compensatory justice, as Easterlin suggests.

6.4.6 Favored Heir Plus Obligations

It is also possible to test the prevalence in antebellum Butler County of this land inheritance practice, also called the "Canadian" pattern by Gagan, which played such a prominent role in studies by Ditz and Gagan. The strategy employed here is to count every instance where a will mentioned an obligation of one heir to another, whether or not the obligated heir was "favored." Overall, 80% of the testators made no use of any obligations and another 5% stipulated only light obligations. These percentages were quite stable until the 1860s when the proportion employing no obligations jumped to 92% and those using heavy obligations dropped correspondingly. The pattern of favored heir (favored son, as we saw earlier) played a minor role in Butler County. It is unclear why Gagan in particular should find heavy use of obligations to accomplish equal overall treatment of heirs while this study

Table 6.7 **Sons Preferred but Daughters Included in Legacies of Land (%)**

Characteristics	*N*	1803–19	1820–29	1830–39	1840–49	1850–59	1860–65	1803–65
All testators	84	13	13	20	10	14	25	15
Log-wealth	84			+ + +		+ +		+ + +
0–.09	2	[—— 9** ——]		[—— 6** ——]		[—— 0** ——]		4
1.0–1.9	27	[—— 12 ——]		[—— 8* ——]		[—— 13 ——]		10
2.0–3.9	58	[—— 17* ——]		[—— 23 ——]		[—— 22 ——]		22
Occupation	74		+					
Blue collar	2	[—— 13** ——]		[—— 16** ——]		[—— 5** ——]		8**
White collar	4							12**
Farmer	65	[—— 15 ——]		[—— 16 ——]		17	31*	17
Not in LF	3	– –	– –	– –	33**	8**	33**	17**
Residence	84							
Rural	75	[—— 13 ——]		[—— 14 ——]		16	24*	15
Small town	4	[—— 0** ——]		[—— 18 ——]		[—— 15* ——]		13**
City	5							16**
Children	84					+		
2	3	[—— 5** ——]		[—— 9** ——]		[—— 8** ——]		7**
3	7	[—— 15** ——]		[—— 5** ——]		[—— 13** ——]		11*
4	12	[—— 14** ——]		[—— 14** ——]		[—— 18** ——]		16
5–6	27	[—— 10** ——]		[—— 16 ——]		[—— 25 ——]		17
7+	34	[—— 15 ——]		[—— 18 ——]		[—— 13* ——]		16

(continued)

Table 6.7 (continued)

Characteristics	*N*	1803–19	1820–29	1830–39	1840–49	1850–59	1860–65	1803–65
Age	85							+
< 50	10	– –	– –	[——— 11** ———]		[——— 7** ———]		10
50–59	6	– –	– –	[——— 12** ———]		[——— 29** ———]		20
60–69	20	– –	– –	[——— 10** ———]		[——— 10** ———]		10
70+	49	– –	– –	37	47	18		23
Marital status	83			+ +				
Married	64	[——— 10 ———	———]	[——— 17 ———	———]	[——— 16 ———	———]	16
Other	19	[——— 13** ———	———]	[——— 6** ———	———]	[——— 18 ———	———]	13
Sex	84							+
Male	83	13		15		15	28	16
Female	1	[——— 12** ———	———]	[——— 0** ———	———]	[——— 0** ———	———]	3**
Ethnicity	84						+	
Non-German	78	12	12*	19	10	15	23	15
German	6	[——— 29** ———	———]	[——— 14** ———	———]	[——— 19** ———	———]	20*
Literacy	83							
Illiterate	18	[——— 13** ———	———]	[——— 21 ———	———]	[——— 18* ———	———]	17
Literate	65	[——— 12 ———	———]	[——— 13 ———	———]	[——— 11 ———	———]	15
Comprehensive equality		+ + +		+ +		+ + +		+ + +
Unequal	66	20	12**	26	12*	24	46	22
Equal	17	0**	14**	10**	8**	5**	7**	7

+ = .10 significance level.

+ + = .05 significance level.

+ + + = .01 significance level.

*$N \leq 5$.

**$5 < N < 10$.

should find so little. Differences in the availability of credit come to mind, but it seems more likely that it stems from the cultural tradition of primogeniture that was the law in Canada West until 1856 but never accepted in the United States.

6.4.7 Summary and Interpretation

For the most part, the levels and trends of land equality and sons preferred to daughters, with their socioeconomic correlates, confirm the findings for comprehensive equality and overall sexism, the comparable inheritance patterns for overall wealth. Two exceptions seem noteworthy: ethnicity becomes a factor (Germans favored equality less but contributed more), and older (rather than younger) testators become the primary contributors to the substitution of equality for sexism in the distribution of land.

The findings that Germans distributed their land more to sons than to daughters, and that they contributed more than non-Germans to the increase in land equality, are consistent with the hypothesis developed earlier. German landowners, especially German farmers, were likely to be among the more traditional members of the population, who were found earlier to favor less the "modern" pattern of equality while contributing more to its substitution for sexism. Indeed, when the data are restricted to farmers, the percentage of Germans favoring sons with land increases some 13 percentage points, while their contribution to the trend over time remains the same.

Still, these findings are at variance with a growing literature stressing the role of ethnicity in inheritance, since German heritage was only one of several factors influencing inheritance patterns; in fact, the underlying cause of the shift in patterns appears bound up in the settlement process, which was probably unrelated to ethnic origin. My suspicion is that these studies have been carefully focusing on anomalies: their choice of distinctive ethnic communities has led to unrepresentative results. It may well take a culturally exclusive community to maintain old-world inheritance practices. Certainly that has been the experience for the maintenance of other distinctive cultural traditions by various ethnic groups in American cities, for example. Areas like Butler County, with its mixture of ethnic groups, were presumably the rule rather than the exception for rural America in the nineteenth century, and the inheritance patterns and their underlying causes found in this county may well be representative rather than those of the more colorful, ethnically distinctive communities.

The finding that older rather than younger testators contributed most to increasing land equality does not have so obvious an explanation in terms of the hypothesis developed earlier. It is possible, however, that the settlement factor underlying the shift in inheritance patterns op-

erated on total wealth for young testators but on land for older testators. If that factor were an attribute of the land itself, the price or its availability, then it might affect younger testators primarily through their ability to establish themselves and their families, while affecting older testators directly through the value of their land holdings. The next section will examine the trends in land availability and prices to explore this hypothesis further.

6.5 The Underlying Cause of the Substitution of Equality for Sexism

Figure 6.5 sets out the trends in land prices, land use, and potential labor force originally presented in my study of testator wealth for Butler County. The proportion of land use in farms shows that settlement came rapidly after the county was formed in 1803. Eighty percent of the agricultural land was in farms by 1820, though much of that acreage was unimproved. Settlement continued thereafter at a slower pace, but land under cultivation still reached 90% by the 1830s when it leveled off. The male population ages 15–69, a proxy for the labor force and the demand for farmland, grew very rapidly till 1830; its growth continued at a slower but steady rate up to the Civil War. Slowly growing and then constant supply combined with rapidly increasing demand to bring about very rapid increases in the price of land throughout the period.

The consequences of the tremendous growth in land prices are quite apparent for young men trying to put together a farm and raise a family: the cost became prohibitive. What may not be so apparent are the consequences for the parents of these young men and their prospective brides. It is generally agreed in the literature that parents were concerned with establishing their children, perhaps with the "start in life for each of his offspring at least as good as that which his father gave to him" that Easterlin suspects. The norm for testators at the beginning of the period, when the county was frontier and land prices were low, seems to have been to provide each son with enough land to set him up with a farm (perhaps comparable value to the one the testator started with) and to provide each daughter with an outfitting of bed, bedding, horse, and so on, sufficient for her to attract a husband. As the county became settled and land prices soared, it became impossible to set up sons with enough land to support themselves and a family (much less a farm as large as that on which the testator started raising a family). By the same token, it was no longer sufficient to outfit a daughter with the traditional dowery, since a prospective husband required a more substantial economic contribution from his bride. Daughters needed land as well as personal property for their dowery because land was the one commodity of substantial economic value most testators owned,

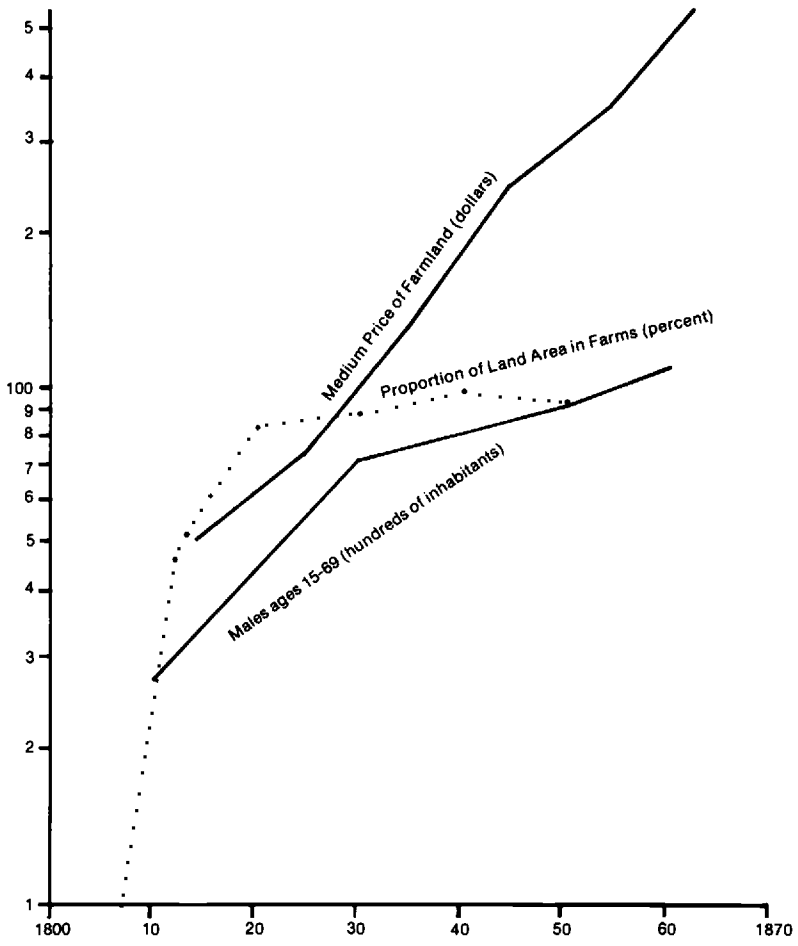

Fig. 6.5 Male labor force, land use, and land prices. *Sources:* Males—United States census of population for 1810, 1830, 1840, 1850, 1860; land area—United States Census of Agriculture for 1840, 1850, Butler County tax duplicates for 1807, 1812, 1813, 1820.

but also because a small tract of land that might be inadequate as a farm might be sufficient for the daughter and prospective son-in-law to use as a homestead while he plied one of the trades that were becoming feasible as the county matured and small towns sprang up. Sons could no longer receive enough land, and daughters had to start receiving land. The norm for inheritance had to change, for sons *and* for daughters.

To explain the growth in equal treatment of sons and daughters, it is not enough to demonstrate that daughters had to start receiving land. It is not readily apparent why the norm did not shift, for example, from leaving all land to sons to bequeathing two-thirds to sons and one-third to daughters—Easterlin's compensatory justice. The answer seems to be that testators were intent on being fair, which meant to them equal treatment for sons and daughters within their respective spheres. For more progressive testators, land was a part of both spheres; for more traditional testators, land belonged exclusively in the male domain. When the norm for inheritance was forced to change because of raising land prices, traditional testators were forced to alter their perception of a woman's proper inheritance to include land. Because they still believed in equality, the shift in perception meant a shift from sexist to genuine equality.

If there was growing economic pressure on young couples attempting to set up a home and start a family, then it could be expected to manifest itself on both age at marriage and fertility. There is an extensive literature detailing delayed marriage as a response to economic pressure, and the point of Easterlin's comments on inheritance is to advance the hypothesis that economic pressures at the American frontier was settled led to the observed decline in rural fertility. In fact, age at marriage rose for men from 24.3 (1811) and 25.8 (1825) to 28.3 (1835) and 27.1 (1845). For women, it rose less dramatically from 19.8 (1811) to 21.0 (1825) to 22.9 (1835) and 22.2 (1845). The timing of the increase in age at marriage for men, especially, corresponds well to the completion of the initial settlement of the county and the predicted onset of economic pressure. The trend in the average number of children of married testators is set out in figure 6.6. The decline is very substantial, from five children as late as the 1830s to just over three children by the early 1860s, and the timing again is quite consistent with the predicted economic pressure. (The unusually low level for the 1860s compared with other Ohio counties no doubt reflects the earlier settlement of Butler County as well as the downward biases in the measurement because some testators died while still in family formation years while others outlived some of their children.)

There is at least some evidence in the literature that these trends in inheritance and the process argued to underlie them are not peculiar to Butler County or this time period. Ryan finds at least as rapid increases in equality for the same time period for Oneida, New York, which was settled at about the same time as Butler County. Ditz discovers much higher proportions of land bequeathed to daughters and much higher proportions of daughters receiving at least some land in 1820 for Weathersfield, Connecticut, and vicinity. She also finds that these proportions increased from 1750. Since that area was settled much

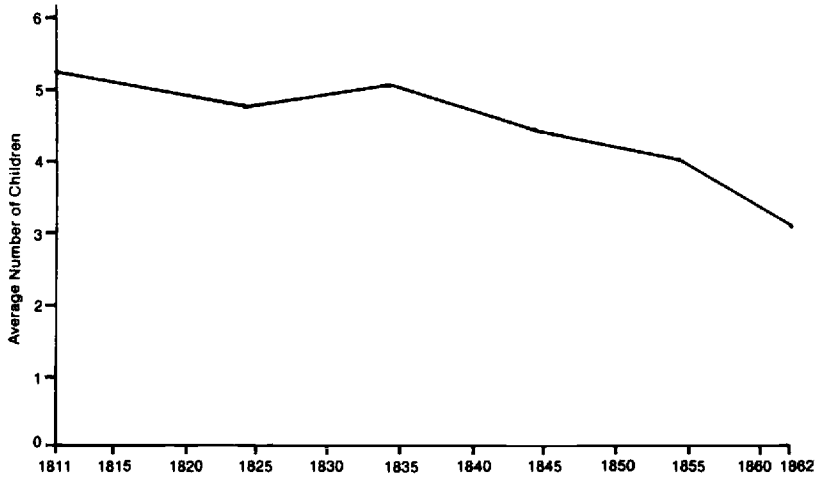

Fig. 6.6 Average number of children of ever-married testators.

earlier than Ohio, these results are consistent with the hypothesis that the same process operated both places, but was simply further along in the earlier settled region.

The recognition that economic pressures can affect inheritance patterns is not new. The literature on European inheritance practices is replete with arguments that particular inheritance patterns are the product of the type of agriculture practiced. Conzen presents a case for the modification of European inheritance in the context of the greater availability of land on the American frontier. Gagan argues that changing land availability in Ontario led to the development of the "Canadian" pattern of inheritance.

What this study makes clear for the first time is that pressure toward equality is inherent in land settlement process. Indeed, the change in attitude toward women in antebellum America may have been as much a product of the settlement of the frontier as of its opening; and both may have been more important (since they were grounded in hard economic realities) than the cult of true womanhood described by Barbara Welter that was being promoted by a few publishing houses.

Comment Lee Soltow

William Newell addresses himself to a most intriguing concept—the equal treatment of children-heirs in the division of estates. His study

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of 1,151 wills in Butler County, Ohio, in the period from 1803 to 1865 establishes the evolution of an increasingly egalitarian view in this respect since the proportion of wills demonstrating comprehensive equality rose from 40% in 1803–19 to over 60% in 1860–65. The increasing importance of intestate cases, with their equal estate division among siblings, only strengthen this finding. His general measure of equality classifies wills by their explicitly calling for identical treatment or almost identical treatment of children, as well as the achievement of equality through consideration of previous transfers to selected children. I suppose this measure is a proxy for enlightenment or liberalism, at least relative to the inegalitarian procedures of primogeniture, opposed by Thomas Jefferson and others in this nation so abundantly supplied with land. Certainly, Newell's finding of the increasingly equal treatment of daughters is in tune with changing perceptions. Even in New Jersey, which had a Butler County connection, sons received a double share in estate distribution for a few years after the Revolution.

Newell studies equal treatment of children by considering nine variables: wealth, occupation, residence, number of children, age, marital status, sex, German origin, and literacy. These influences are handled within a framework of classification tables (rather than by means of multiple regression analysis), a process leaving many cells with rather few cases in some of his two- and three-way cross-classification tables. The author finds that wealth was inversely related to equality in any decade, but the greatest movement toward equality, over time, was within the wealthiest group. Adjustment for either age or number of children seems to temper these results, but Newell finds that wealth is an important dimension. The young, the literate, and those in small towns enhanced the probability of equality. A special study of *land* inheritance shows similar results, with two important exceptions. Testators of German extraction demonstrated less inequality in any given period, but contributed more toward the move to equality over the long run. In the case of land, the old contributed more to the trend in equality.

Newell's cogent argument is that increased land scarcity and the rapid rise in land values forced the trend toward equal shares of real and personal estates inherited by children. He shows this scarcity in two ways: the average age at marriage increased 3 or 4 years for males, and the number of children decreased from more than 5 to about 3. It is asserted that after 1850 daughters needed land as much as did sons as they married and formed farm families. But couldn't one also argue that the early deprivation in Ohio, be it in land, buildings, dwellings, or farm animals was even more crucial? Wouldn't the rapid rise in per capita wealth in Ohio allow at least some differentiation in sibling

portions? The considerations of testators are indeed complex, as shown by Marvin Sussman in his study of family inheritance in Cleveland, and by Carl Shoup in his study of estate planning by the rich. Very real is the attention, the care given to the old by one child compared to another, or the number of years of farm labor given by one child compared to another. Fairness in payment for past service to the testator may demand *inequality* in sibling portions. These productivity considerations can be related in a complex fashion to demographic and economic change, to a society which is aging, to one having fewer children, to one which is increasingly urban.

If equality in the distribution of estates increased because of general enlightenment, then it should appear in the strategic variable, literacy, or literacy adjusted for wealth. The diffusion of knowledge and culture in early nineteenth-century Ohio would have come from books and newspapers in the home as well as from the great surge in common school attendance (but only among the young by 1860). Again, this is an exceedingly difficult movement to quantify. Edward Stevens (1981) has studied numbers of books in both testate and intestate inventories in Washington (Marietta) and Athens Counties, in eastern Ohio, before the Civil War. He found that the majority of decedents had owned books, of which 63% were religious in nature, so we face the issue of whether this type of literature would lead to the concept of equality in treatment. At that time there were few scientific or philosophical books, the reading of which would have forced one to examine alternative ways of thinking—to break from past traditions. Some almanacs of the day, in rather wide use, included will forms for the use of the owner as well as consideration of sibling shares in estates.

Alternative treatment of some of the variables might have uncovered other causal relationships in Newell's data. Wealth and literacy could have been cross-classified because they are highly related. Perhaps a multiple regression equation of cases, with and without age data, would better reveal the characteristics of the set of persons not found by Newell in the censuses, presumably those who were more mobile. The fascinating downward trend in the number of children per testator, ending with an average of a little over three, seems quite shy of the 1860 census average for the United States, particularly if we are dealing with families with two or more children. Testators represent what proportion of those dying and of those with inventories? Were testator characteristics significantly different from those of the intestate group? Was there an increasing proportion of female testators? Finally, was Butler County typical, either of the state or the county? The cash value of its acreage of improved and unimproved land ranked second among Ohio's 88 counties in 1850, three times the national average; its land

was sought after in the first surge of settlers into Ohio in 1795. Newell may have captured the more dynamic features of the trend toward family equality in America in this impressive study of Butler County.

Reply

Professor Soltow's comments seem to fall into three categories: interpretation, statistical methods, and data. I have answered his substantive questions about the data by placing additional information in the text. His quite appropriate methodological criticisms have been met by replacing cross-classification tables with logistical regression analysis. Consequently, this reply focuses on his questions of interpretation.

If I understand his argument, Soltow advances two alternative explanations for the trend toward substituting equal for sexist treatment of children. The first is that the rapid rise in per capita income following an initial period of economic deprivation made possible some "differentiation in sibling portions." The second is that what I have called compensatory justice "may demand inequality in sibling portions" since children were more likely to have provided unequal "past service to the testator" as farms operated for more years since the opening of the county to settlement around the turn of the century. These arguments, however, appear to me to provide two of several possible explanations for *increasing* inequality in the treatment of children as the county was settled, when in fact the observed trend is toward *decreasing* inequality.

Soltow questions my interpretation of the trend toward equality on the grounds that literacy should then appear as a "strategic variable." In fact, literacy is significantly related cross-sectionally to equal treatment: on average, more literate testators were more likely to opt for equal treatment—they were more likely to accept the "modern" practice. What literacy does not explain is the trend toward equality—the adoption of that modern practice by more traditional members of the population. I do not believe, however, that literacy had its effect through knowledge of inheritance practices as much as through values. It seems plausible to me that more traditional testators abandoned the inheritance practice that their education (and other factors) had predisposed them toward, when that practice was no longer functional; and they replaced it with another practice long familiar to them that was now more functional given the altered assumptions forced on them by the changing circumstances associated with the settlement of the frontier.

If I am correct that the settlement of the frontier set economic processes in motion that necessitated changes in social norms such as

inheritance practices, then it would be reasonable to expect that patterns of testation established by the end of the settlement period might persist. In fact, a sample of wills filed in Butler County in the 1890s (roughly 30 years after the end of this study) showed exactly the same proportion specifying equal treatment as did the wills of the 1860s.

This study, along with my earlier one of Butler County, suggests that we need to pay much closer attention to the ramifications of the settlement of the frontier. If the resulting increases in land prices in Butler County brought about substantial increases in the equality of inheritance within families and in the inequality of the distribution of wealth among families, then we need to ask what other major economic, social, or political changes might have the same source. Did other counties in other states experience the same extent of price increase? Did they undergo similar changes in wealth distribution or inheritance practices as a result? Finally, these two studies of Butler County point up the need for caution in interpreting the consequences of settling the frontier. For example, this study might seem to suggest that the settlement process improved the economic status of women (by replacing sexist with egalitarian inheritance practices), yet my previous study seems to suggest just the opposite (because women owned a small proportion of the land, which was the source of most of the increase over time in wealth). In fact, the two studies taken together show that settlement and the increasing land prices that resulted from it had more than one consequence for any one group or collectivity. Any analysis of the significance for that group of settling the frontier must examine the full range of its effects. I suspect that we have just started to discover the profound consequences of the settlement process.

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