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Grist, Grit, and Rural Society in the Early Nineteenth Century Midwest: *Insight Gleaned From Grain*

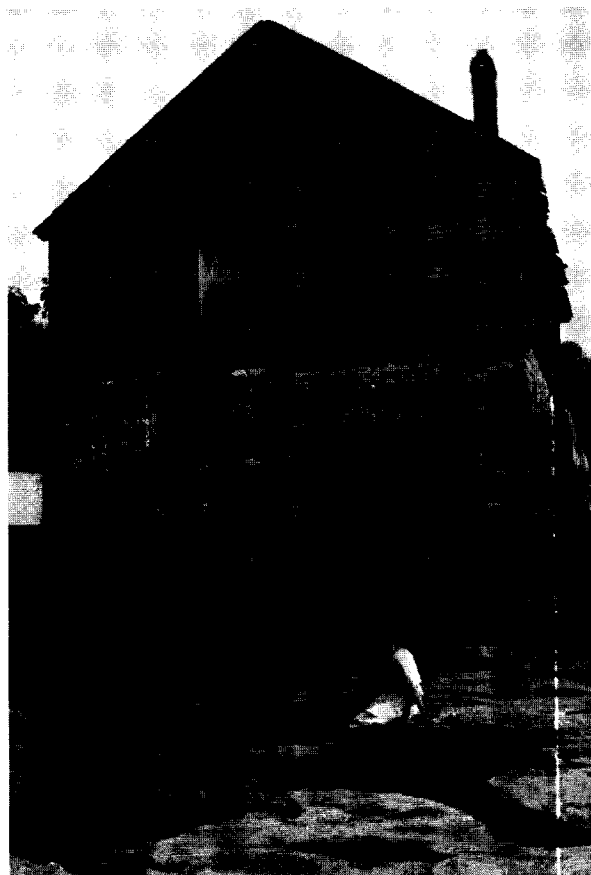
GINETTE ALEY

Perhaps, however, the surest pledge of prosperity is the general industry of the inhabitants—which renders the situation of individuals comfortable, and gives a smiling appearance to the village.

The Indiana Gazetteer (1826) on the prospects of the town of Richmond¹

King's Mill on the Dix River in Boyle County, Ky. The Filson Historical Society

To many late eighteenth and early nineteenth century observers, the bounty and prosperity of the Old Northwest, or early Midwest, lay just beneath the earth's surface and awaited only the industrious hands of European immigrants to work it, and bring it to fruition. Israel Ludlow, a land surveyor working in the Miami country along the Ohio River in 1788, for example, extolled the land's apparent natural fecundity and potential for profit. "The fertility of the country is such," he recorded, "as will afford an easy and wholesome sustenance to the inhabitants & the prospects of future opulence, perhaps as great as any country in the world that depends upon the cultivation of the land for its source of wealth." Indeed, after an initial clearing of the land, farmers did coax an agricultural abundance fairly easily from the soil. From the New Harmony colony in Indiana, Marie Fretageot wrote to her correspondent in April 1829 of the material progress made by the commune's members. After noting the improving state of local educational, printing, and mechanical enterprises, she noted how impressive and appealing she found the development of agriculture in the area. She noted



the land revealed “the agreeable appearance of industry,” and that by the end of the month she expected to have forty acres of corn planted. Similarly, in 1832 and 1834, Daniel Ludewick wrote letters from Illinois to his parents back in Cabarrus County, North Carolina, itemizing the results of his labor and industry in terms of shocks, bushels, pounds, and bundles. He assured them, “You would be surprised at the bountifulness of this country.”²

Ludlow’s optimism about the region’s “future opulence,” Fretageot’s use of the term “industrious” in reference to agricultural productivity, and Ludewick’s boasts of “bountifulness” convey a sense of the values, aspirations, and visions—not to mention primary activities—of early Midwestern farm people for themselves, their infant communities, and their adopted region. Having gained access to the soil as a result of the persistent, aggressive westward advance that ousted the British from their trading posts and progressively dispossessed Native Americans from their lands, Euro-Americans fanned out to settle the Old Northwest during the late eighteenth and early nineteenth centuries. They staked out farmsteads, with and without formal land titles, and began the arduous process of transforming the landscape into one that meshed with their economic and cultural visions of prosperity and industry. More than just the oft-repeated “order upon the land” envisioned by early land policymakers, immigrants by and large wanted to see productive agriculture in the European mode planted in the young Republic’s western landscape. Early Midwestern town boosters appealed to these ideological connections. In 1839, Peru, Indiana, real estate developers advertised that, while the town lots were also being improved, the fertile soil of the adjacent country was being “stripped of its foliage given it by nature and successfully tilled, yielding abundantly to the enterprising and industrious farmer.” Along with its economic and cultural dimensions, this transformation proved to be a visual and physical one, as farmers re-ordered the western spaces they now claimed into a more familiar, predominantly agricultural, and incipiently commercial place. This new region would be filled with cleared fields and fences, as well as cabins, barns, roads, mills of all kinds, and, soon, canals.³

Developing a settler society also involved a complex set of social relations—some re-created from the settlers’ home societies, some instituted for the first time. For example, economic development brought together farmers who produced agricultural commodities and grist millers who processed those commodities, mostly corn and wheat, into products for household consumption. As settlements developed further, these same commodities grown by farmers came to represent surpluses available for marketing—locally first, then externally—or for use in bartering within communities. In much of the Old Northwest during the early 1800s, particularly in Indiana, the main problem for farmers lay not in producing a surplus but in overcoming the discouragingly slow march of internal improvements. Throughout this period of farm-building and com-

munity-making, interactions between farm people and millers embodied an important link in the region's agricultural and economic development in a number of ways. As articulated in the expressions of Ludlow, Fretageot, and Ludewick, these have at their heart a commitment to stimulating productive agriculture, material progress, and prosperity in the region.⁴

Milling and farming formed an intertwined rhythm of life that influenced the development of rural communities in more ways than is usually conceded in the scholarly literature on the frontier Midwest. An examination of the intersection of these two activities can reveal how economic practices had cultural consequences that in turn shaped economic development. Certainly, milling, an essential economic activity, embodied some of the earliest, most essential, and most routine face-to-face interactions among settlers, and therefore must be considered a basic community building activity. Moreover, in this period, both milling and farming were rooted in a system of family labor and cooperative events as new homes got built, farms laid out, towns founded, and enterprises begun. Thus, exploring grain production and processing, clearly an important feature of the early rural Midwest, affords a range of insights into the human drama of pioneering.⁵

As milling and farming practices shifted over time, so too did the relationship between them. The relationship between milling and farming should be considered fluid, responsive, and extensive as it adapted to changing community needs, milling technologies, settlement patterns, and increasing farm yields, as well as improvements in transportation and market access. Moreover, millers and farmers did not exist as mutually exclusive entities. Farmers owned and operated many local grist mills, as historian Gerald Waite found in his study of Delaware County, Indiana, milling. Hence, producers and processors did not comprise separate interest groups, but rather worked together in complementary ways within a broader rural culture centered around community and family. As such, grist can be considered as much an emblem of frontier society as it was a product of the mills.⁶

This perspective cuts across a misleading dichotomy, one that appears to be driven by semantics sometimes deployed by historians. In a 1982 review



*Old Mill near downtown
Bardstown, Ky., ca. 1901.
The Filson Historical
Society*

of Nicholas P. Hardeman's cultural analysis of corn entitled *Shucks, Shocks, and Hominy Blocks: Corn as a Way of Life in Pioneer America*, for example, agricultural historian John Schlebecker, taking issue with Hardeman's major premise, argued that corn "is not, and never was a way of life." Schlebecker



Wolf Pen Branch Mill near Louisville, ca. 1890. The Filson Historical Society

insisted, "[c]orn is a plant, and a way of life is something else." While it is true that each can be considered uniquely defined in the English language and infused with separate meanings, in reality corn and a specific way of living on the frontier cannot be understood separately in the way that Schlebecker contends. By seeking instead to identify connections and relationships between the two, we gain insight into how rural agricultural societies developed and how people in those societies came to relate to each other. In this way, mills, for example, can be viewed more as hubs for a number of transac-

tions—cultural, social, and political—rather than simply as points of economic production or exchange.⁷

Corn milling represented the first and most basic processing industry in the Old Northwest. To be rendered usable as meal or flour, corn and other grains needed to be milled, or ground, in order to separate the fine "mealy" parts of the grain from a tough bran covering. Corn served as the primary crop and basic food staple for Midwestern pioneers given its ease of cultivation, its durability, and its versatility. True, corn did not have to be milled in order to be eaten. Travelers such as Thomas Dean, a Quaker who came to Indiana in 1817 seeking land on behalf of the Brothertown Indians of New York, subsisted largely upon roasted and boiled corn. But if it were to last more than a few days, corn had to be allowed to dry, and then it was too hard to eat and had to be ground. Therefore, settlers and territorial officials sought to establish mills and, as they had earlier in the eighteenth century in more settled areas of the country, mills became essential to the local economies of the early Midwestern frontier. Indeed, mills often expanded to become the nucleus of a local concentration of manufacturing, adding on additional structures to facilitate saw milling, tanning, and distilling.⁸

In law, the territories or states of the Old Northwest defined milling as a complex public utility that required a series of regulations that, among other things, established tolls that millers could charge and means for holding both millers and farmers accountable for their actions. The first act to regulate

milling in the Old Northwest was passed in 1799. This was followed by a law approved by the Indiana Territory's General Assembly in 1805 that outlined the rules for building mills and dams, a law that was amended two years later to clarify the responsibilities of miller and farmer in the process of milling. The law required that different tolls be charged depending on the kind of mill involved and the type of grain being milled. This served to compensate mill owners for constructing their mills as well as for the actual grinding "in his, her or their said mills." Millers could charge more for bolting the grain, a process ordinarily done in merchant mills that entailed forcing the grist through a sieve, leading to a more desirable refined flour product. For a smaller fee, farmers could have their grain simply ground between the millstones producing what was called meal, the principal product of grist mills. Ohio pioneer Irenè Hardy recalled that many farm families took their grist home unbolted so that the sifting could be done as the meal was used. Millers who operated water-powered and wind-powered mills, could legally charge one-tenth of the milled grain for grinding and bolting either wheat or rye into flour, and one-seventh for the same service involving Indian corn, oats, barley, or buckwheat. To grind but not bolt the latter, the toll was reduced to one-eighth, while for grinding malt and chopping rye, the toll was one-twelfth.⁹

Horse mills especially illustrate a degree of miller-farmer cooperation. These mills were more commonly built during the early years of settlement, as well as in areas removed from an adequate mill seat. One southern Indiana pioneer, William Cockrum, recalled that horse mills became common after 1808, and that they did "good work" and were "well patronized," some operating for twenty-five years. Cockrum further pointed out that "many little horse mills" were built in the state between 1820 and 1830, and that their business was primarily local in nature. By law, owners of horse mills were obligated to provide horses on the premises in order to extract the allowable tolls for their service, although some accounts refer to oxen being used as an alternative. In the 1830s, for example, Carlinville, Illinois, settlers relied upon an ox mill, although, as was true of many, it was not consistently in operation and therefore could not be considered as reliable as a horse-powered mill.

According to other accounts, however, some farmers used their own horses during the grinding, presumably leading to a reduced toll. Two "stout" horses were ordinarily required to turn a light mill well, otherwise the grain would be very coarsely ground. "Each customer," wrote Ohioan William Cooper Howells, "took a couple of horses with harness on, and hitched them on to the mill to make the power. Sometimes they would meet others at [the] mill, then they would unite their teams, putting on six or eight horses, and then it would go pretty merrily." The disadvantage in this arrangement lay in inevitable delays, since once a farmer joined his horse with the others, he then had to wait to get his share of the grist until

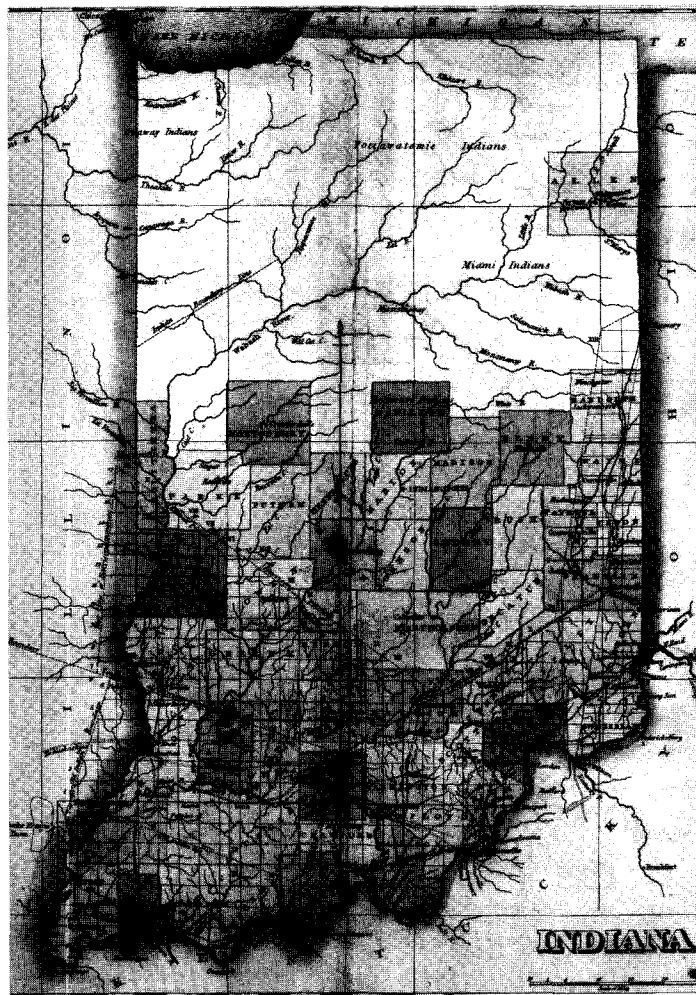
the whole group's grain had been ground.¹⁰ Horse mills cost more to operate than water mills because, of course, the horses had to be fed and sheltered. Thus charges were typically higher except in cases where customers supplied the horses themselves. For grinding and bolting wheat at a horse mill, the toll was one-fifth; for rye, Indian corn, oats, barley, and buckwheat, the toll was one fourth; and for malt and chopping rye, it was one sixth.

To a degree, the law granted millers a limited liability in their operations that meant that farm people were somewhat at risk in protecting their grain.

The law held millers accountable for receiving and safe keeping the grain while it was at the mill site. Should the grain become lost or destroyed, the miller had to make restitution—*provided* that the farmer had distinctly marked the grain sack or cask with his name or initials. Under no circumstances (aside from pure neglect) would the miller be held liable for the loss of grain as a result of robbery, fire, or “any other unavoidable accident.” Moreover, should a miller “demand, receive, or take” a higher toll than was allowable by law, he or she would be subject to a five-dollar fine, payable to the county, or he could face jail time. This was the same penalty meted out against millers who failed to “measure all grain by striking measure,” or who, in other words, took more than they were entitled.¹¹

Legalities aside, the basis for the relationship between millers and farmers was simple and customary in nature. Millers were expected to “well and sufficiently grind” the grain brought in by the farmers, and it must be done “in due time” and in turn. In other words, farm people could expect an orderly and “timely” pro-

cessing—in as much as possible—of their grain with no preferential treatment given. This precept was understood as standard practice between millers and farmers, and yet Oliver Johnson, a pioneer of Marion County, Indiana, recalled that the miller might exercise some discretion in the case of families who were out of meal and in great need of it for food. Then the miller “might take pity on you” and slip a hungry settler's corn in ahead of the others, or allow him or her to leave their grain and take home someone else's grist.¹²



Geographical, Statistical and Historical Map of Indiana. 1824. Engraved by Young & Delleker. Cincinnati Museum Center, Cincinnati Historical Society Library

Millers clearly enjoyed a degree of power based upon their control of a much-needed “public utility” in perennial short supply in new settlements and remote areas. And to the degree that farm people internalized their initial dependence upon the miller, in much the same way that they would with railroads at mid-century, they viewed him with a mix of suspicion, caricature, and respect. One no doubt apocryphal story, for example, involving a father, his son, and the miller, conveys some sense of this ambivalence as well as an idea of how a rural family labor system worked. The father sent his son, “a good sized lad,” to take the corn to be milled at the “corn-cracker,” but warned him to keep a steady eye upon the miller lest he steal it all. At the mill, the boy watched wide-eyed as the miller appeared to do just as his father predicted, dumping the entire contents of the sack into a hopper. Unaware of how the milling process worked and not wishing to lose the sack as well, the boy grabbed it when the miller set it down, and ran home to tell his father. “The old rascal stole every grain of the corn and aimed to keep the sack” as well, he reported. A contemporary verse that captured some of the farmers’ distrust in another way went as follows:

The miller must have a pen of hogs
And they were always very fat,
It was uncertain, says the song,
Whose corn they always ate.

I ndeed, some farmers claimed that millers regularly took a higher toll than was due to them. William Cockrum for one believed that “most of those who owned mills were on the black list for honesty.” One miller accused of short-changing farmers, however, claimed that the real thieves were crows, blackbirds, and squirrels that fed on the grain after he commenced milling in the morning, a situation for which he could not be held liable. He explained that the mill ground so slowly that he left the site to attend to other business during the day, only returning in the evening to collect the accumulated grist.¹³

While suspicion and distrust may have colored some interactions, particularly when grain was scarce, Midwestern pioneer accounts also show respect and regard for the “enterprising” millers who expanded and upgraded their milling operations to meet the growing needs of nearby communities. Indiana flour miller Cornelius Fleece was said to be “a man of towering energy,” a “leading man of Waverly, [and] a typical business pioneer,” who swept away obstacles and developed the country’s resources “to a marvelous degree.” Some millers improved their local reputations by adding one to three runs of millstones that benefited farmers by reducing the wait for grinding. Many mill yards also incorporated saw mills as did the one owned by John Cox of Morgan County, Indiana, around 1830. According to one pioneer, Cox’s mill yard was a place “full of life and energy” where the “hum of machinery was heard from Monday morning till Saturday night.” Here was the source for

most of the lumber used to build local houses and barns, as well as for flatboats that transported pork, corn, and wheat to the New Orleans market. Sometimes simply longevity earned millers the friendship of farmers such as Jacob Bonty of Gipson County, Indiana, who built a mill in 1820 that remained in operation for thirty years and was judged “a great help to the surrounding country.” As producers and processors of the region’s agricultural commodities—the “basis of our public and private wealth,” according to Indiana’s Governor Jonathan Jennings in an 1818 annual message—farmers and millers were very much at the center of the developing Midwestern economy.¹⁴

Relations between the two intensified with expanding market access, which for Indiana was symbolized by the opening of its canal system beginning in 1835 and maturing in the 1840s. Charles Titus, a young Methodist schoolteacher from the East, noted the change as he traveled on the newly opened Wabash and Erie Canal in 1843, remarking that “[a] new day has now dawned upon the agriculturist of this region.” As a result of their locations at prime spots along a river or canal, merchant mills for the first time had the means to both keep up the local custom grist milling and channel farmers’ surpluses to distant markets.¹⁵ Specifically, farmers now could expect cash for their surplus grain. William Cooper Howells, for example, noted that by 1840 local merchant mills in Ohio paid him cash for wheat, as much as fifty cents a bushel. Selling for cash to distant markets, however, had a disadvantage—transportation charges. In Howells’ case that amounted to twenty five cents per bushel. Farm people therefore often faced a choice between taking cash at some far-off merchant mill, or knowing that they could get thirty cents a bushel in trade value with a local storekeeper. In the developing Midwestern economy, bartering sometimes could still be an attractive alternative to the market economy.¹⁶

With greater commercialization and market participation, the relationship between millers and farmers became quite interdependent. Enterprising merchant millers like Cornelius Fleece, for example, depended upon the farm commodities that they processed as the farmers did on the cash he paid them. In 1837, Fleece built an ambitious mill establishment that supported four runs of mill stones and that in its heyday served a (perhaps overstated) number of “no less than one hundred wagons a day.” Flatboats regularly departed from Fleece’s river-side mill yard laden with flour, kiln-dried meal, and cut lumber, bound for the New Orleans and coastal markets. Other millers shipped to ports even farther afield. One Madison, Indiana, pioneer recalled that “large quantities” of kiln-dried corn meal ground at a site operated by a Captain David White was actually shipped to Ireland during the famine there.¹⁷

Before the advent of commercial mills in the Old Northwest, geographic isolation made it difficult for settlers to secure their daily bread, a significant challenge that they sought to meet communally. Early settlers, for example,

devised numerous kinds of local milling apparatuses to share among themselves on the frontier. Ezra Ferris, who as a boy emigrated with his parents from the East to the Miami Country north of the Ohio River in 1783, remembered “the circumstance full of encouragement” when a Mr. Coleman used his “extraordinary genius” to build the small community a mill. Having few options, Coleman installed a corn mill in the bottom of a flatboat that could then be situated below a fish dam constructed by the settlers. The floating mill was tethered to the shore by a rope, and when the settlers needed grist, they loaded their corn into the hopper and shoved the boat to where water from the dam fell onto the wheel, which then powered the grinding stones. Later, they would pull the boat to shore to retrieve the grist. This mill served local settlers well until a flood swept it away. Other accounts also note similar kinds of mills elsewhere.¹⁸

Settlers in isolated areas without access to a grist mill of any kind ordinarily resorted to the most fundamental source of power—human strength. At home, a settler sometimes used a variation of the primitive mortar and pestle, or a stump mortar. Others used a spring-pole mortar that afforded some relief in the work of pounding by suspending the pestle above the mortar through an overhead attachment to a sturdy tree. Because settlers did much of this work outside, the sound of pounding was said to have been heard a mile away, and occasionally settlers used the sound for signaling purposes. Some milling was also done in Yankee coffee grinders brought by settlers from the eastern states.¹⁹ More frequently, Midwestern pioneer accounts refer to using a hand mill, or quern. These were constructed variously, some using a hollowed-out tree trunk for a base in which to set the two millstones. Farmers inserted a crank rod into the top (runner) stone, and a downward spout was carved into the trunk to allow the meal to spill out and be collected. When no other form of milling was available, settlers grated their corn. Early Quaker settlers of Indiana’s Whitewater Valley in 1806, for example, had raised corn although there was “no mill to grind it” in the neighborhood. Therefore, “for some weeks we grated all the meal we made use of.” Similarly, an Ohio pioneer woman recalled: “I have heard my father say that he had gone into the corn-field in October to get ears of ripened corn to grate on the kitchen grater to make meal for bread for breakfast.” She added that “the old necessity” of grating corn for meal and mush left many farm people with a persistent craving for it later in life. On the other hand, much of the domestic milling produced a

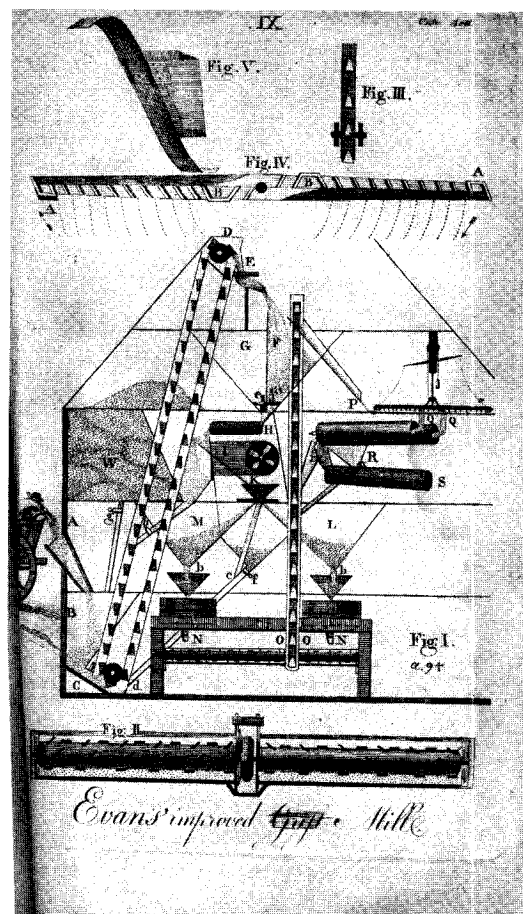


Plate from *The Young Mill-Wright's and Miller's Guide* by Oliver Evans, 1807. The Filson Historical Society

meal that was very coarse, “as coarse as small shot or coarse sand,” according to one German immigrant farmer in Indiana in 1836. This gave breads and meal a hard texture and a disagreeable taste.²⁰

One estimate suggests that meeting the daily needs of a family for meal or flour required two to three hours of strenuous grinding. Any family member might be assigned this task. The boys, for example, in one northern Illinois family labored many hours in the 1820s to grind enough to supply the passing flow of western travelers with needed grist. This circumstance, along with the fact that the nearest mill was eighty miles away, prompted their father to build a neighborhood horse mill.²¹ Therefore, local mills were ordinarily built as soon as possible to supercede the drudgery of domestic milling.

Until the advent of local mills, however, farmers often traveled great distances over poor roads to have their grain ground. Branson Harris recalled that some families traveled up to thirty miles to a water-powered mill with a bolting-cloth for flouring. “Sometimes,” he recalled, “it would take two days to go to mill.” Oliver Johnson wrote that his father’s trips to the nearest mill often required an absence of three or four days, “and mighty anxious days and nights they was for mother.” In the 1830s, the mill Jacob Schramm used was only an hour’s drive by wagon away, but “the road there was frightful.” Illinois resident Mary Byram Wright described how settlers had to go to neighboring counties to grind their corn, and that no flour mills were built in their county “for many years.” In short, “going to mill” typically represented the longest and hardest travel that pioneer settlers had to regularly negotiate, which was then followed by a wait to have their grain ground “in turn.”²² Town and community promoters for their part used access to mills to entice prospective settlers their direction. Advertisements for town lots frequently included references to nearby mills, such as the one offering lots for sale in the town of Solon, Indiana, in 1831, in which promoters promised that Solon had “fine settlements and good Mills convenient.” “The farmers we like to see coming and settling down on the uncleared lands of the county,” wrote the *Peru Gazette* in October of 1839, “it speaks well for the rise and progress of improvements in this new country.”²³

The difficulties associated with pioneer milling can also be seen in census figures and other sources of enumeration. To comprehend the impact of distance on farm people with milling needs, we need to consider the vastness of the territory northwest of the Ohio River in relation to the small number of early settlers. In 1800, the United States Congress created the Indiana Territory that roughly encompassed the area equaling the present states of Indiana, Illinois, Wisconsin, and half of Michigan. By 1810, the population of free whites and a relatively small number of “negroes” in that territory had grown from 5,641 in 1800 to 24,520, reaching 63,897 only five years later, in 1815. By this time, Michigan and Illinois had been carved out from the Indiana Ter-

ritory as separate territories in 1805 and 1809 respectively, leaving Indiana fairly close to its present boundaries and covering about 36,000 square miles. As late as 1840, census data analyzed by historian Louis Hunter indicate a probable ratio of grist and saw mills to western settlers of about 1:350.²⁴

Data in the manufacturing censuses for 1810, 1820, and 1840 presented in Figures 1 through 3 also show a progressively expanding agricultural economy linked to milling in Indiana and Illinois, which can be used to make inferences about the region as a whole.²⁵ In 1810, when the Indiana Territory was ten years old, census takers recorded only one wheat mill, three horse mills, and thirty-two grist mills. The latter two processed nearly 48,000 bushels of grain, while the wheat mill produced 1,500 barrels of flour. Correspondingly, Illinois possessed five wheat mills as compared to Indiana's one, with an output of 6,000 barrels of flour but, oddly, no other type of mill was reported.

Figure 1: Enumerated Milling Capacity in Territorial Indiana as of 1810
(Illinois data in parenthesis).

| Mill Type | Wheat Mills | Horse Mills | Grist Mills |
|-------------------------|----------------------------------|---------------------------------|----------------------------------|
| Number of Mills by Type | 1 (5) | 3 (0 enumerated) | 32 (0 enumerated) |
| Output | 1,500 barrels (6,000 barrels) | 7,000 bushels (0 enumerated) | 40,900 bushels (0 enumerated) |

Data is from: *A Statement of the Arts and Manufactures...For the Year 1810*.

The categories of data in Figure 2 from the 1820 census focus not on mills but commodity production, a better barometer of economic activity. Somewhat problematic is the counting of pairs of millstones, rather than mills in this census, since some mills employed more than one “run” of stones; thus, to presume that sixty-five pairs of millstones represented the same number of mills would be spurious and misleading.

Figure 2: Milling in the State of Indiana as of 1820 (Illinois data in parenthesis).

| Article Manufactured | Raw Materials Employed | Quantity of Raw Materials Annually Consumed | Quantity of Machinery in terms of millstones |
|----------------------|---|---|--|
| Meal and Flour | Corn, Wheat, and some Rye (no Rye specified) | 354,064 bushels (40,450 bushels) | 65 pairs of millstones (16 pairs of millstones) |

Data is from: *A Statement of the Arts and Manufactures...For the Year 1820*.

And in Figure 3, the 1840 census data reveal, perhaps more than anything, Indiana's commitment to cereal grain production, especially corn, since grist mills outnumbered wheat mills.

Figure 3: Milling in the State of Indiana as of 1840 (Illinois data in parenthesis).

| Number of Grist Mills | Number of Flouring Mills | Total Number of Mills Enumerated | Barrels of Flour Manufactured |
|-----------------------|--------------------------|----------------------------------|-------------------------------|
| 846 (640) | 204 (98) | 1050 (738) | 224,624 (172,657) |

Data is from: *A Statement of the Arts and Manufactures...For the Year 1840*.

Finally, according to the 1850 census, annual corn production soared to nearly 53,000,000 bushels, while wheat production increased gradually to around 6,000,000 bushels. This same year, the combined totals of three of the Old Northwest states—Indiana, Illinois, and Ohio—amounted to 28.6 percent of the nation's total corn production.²⁶

Mills on the frontier, however, served not just to grind grain but also symbolic functions. Indeed, mills created what farmers considered “civilization.” “As mills for grinding grain and sawing lumber are absolute necessities to civilized people,” recalled a Morgan County, Indiana, pioneer, “the early settlers set about erecting them as soon as possible.” Major farm journals such as the Albany, New York, *Cultivator* promoted the connection between mills and culture by printing a masthead on its front page that proclaimed: “Agriculture, at Once the Cause and Evidence of Civilization.” This symbolic function became manifest in building of mills themselves, a “raising,” a feature of western culture that involved as many men as could be brought together in the lifting, and a considerable number of women in the food preparation. “It was an exciting scene,” one witness recalled, “to look at seventy men pushing up a mill house bent fifty feet long and thirty feet high,” and that “all men, everywhere, considered it their duty to help raise mills . . . asking nothing in return but their dinner.” Of course, despite the altruistic tone of this account, pioneer men and women *did* expect something in return—access to milling.

The symbolic value of mills came mainly from the investment in labor they represented, not just in building the mill, but in producing the grain, both corn and wheat, that a mill would process. Wheat required considerably more effort than corn beginning with harvest which for wheat was time-sensitive at ripening, and often compelled the immediate assistance of all family members. Community labor-sharing at harvest and during shocking was also common. The wheat then had to be threshed, either with the whip-like flail or treaded

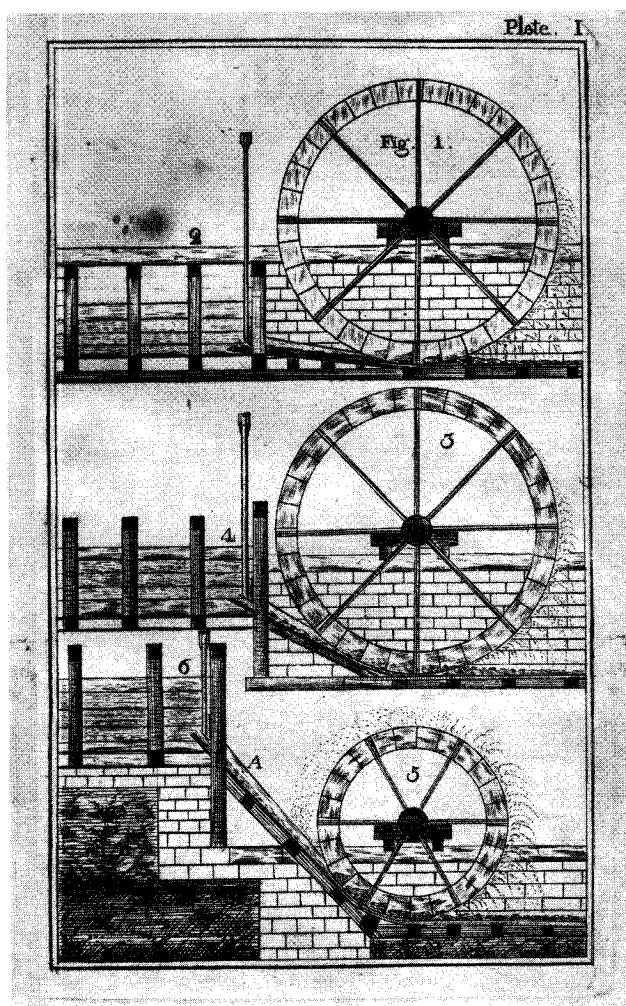
under the hooves of oxen or horses, in order to separate the wheat seeds from the chaff and dirt. If this was not adequately done, farmers could anticipate a lower price for their grain or poor quality flour. Following this separation, one method employed by pioneer farm people to winnow out the grain from the chaff was for several people to grasp a sheet and, in a strenuous manner, generate “a good blast” of air that blew away the lightweight chaff and left the wheat. Ohio pioneer William Cooper Howells noted that women, girls, and boys assisted in winnowing, with the children often having “a jolly time besides.”²⁷

Corn, on the other hand, was a more versatile crop. It did not necessarily need to go to the mill before domestic use, often served as feed for the livestock, and was at the center of several community-wide frolics in which labor and socializing combined to lighten the burden of frontier isolation and pioneer food production. Corn could be simply boiled or roasted for eating or grated for meal for bread-making or mush, although pioneers preferred mill-ground corn for meal or mush. Unlike wheat, corn could be harvested as time allowed, and then the farmer, with help, would then cut and shock the stalks and afterwards allow them to dry. Eventually, the ears would be shucked and stored in the corn crib until needed. A corn shucking frolic brought the neighborhood together for what was typically characterized in pioneer accounts as enthusiastic, even competitive, husking until all of a farm’s corn was husked and tossed into the corn crib. This was followed by a tremendous spread of food, often accompanied by corn whiskey, which the neighboring women had spent several days preparing and that frequently drew glowing commentary from travelers.²⁸

Child and family labor represent an important yet little explored extension of the relationship between producer, processor, and the emerging grain economy in the Midwest. That children would become an important part of farming should not be surprising since immigrating farmers and their families tended to be young. In his study of frontier Indiana, Andrew Cayton found, for example, that the “most striking fact” of that time and place was the “preponderance of youth” in the territory. Indeed, nearly one-half of the whites listed in the census were under sixteen years of age. Ohio pioneer William Cooper Howells’ own experience confirms Cayton’s observation. He noted that “[w]here the farms had only been a few years settled, and where the farms were still being opened up, the families were mostly young; that is, the children nearly all in their minority.” He also pointed out that domestic work and farm chores were in many ways age and gender blind: “The rule was, that whoever had the strength to work, took hold and helped.”²⁹

Children played a particularly important roll in processing corn. When the farm family needed corn for meal or mush, the husked corn would be shelled, usually by hand but some also employed a device known as a corn sheller. Ac-

According to Irenè Hardy, shelling corn was an “evening occupation which came whenever fresh corn meal was needed for bread” in the homes of antebellum Midwestern farm people. She and her sister, both youngsters, assisted their father who would begin by bringing in a bushel of the “best ears of mill corn.” The girls’ pleasure came afterwards when they were given the cobs that had been stripped of corn to make cob-houses. The bulk of the family’s shelled corn was then taken to the mill in sacks for grinding. Numerous reminiscences written by men recount that this had been one of their most important and stressful responsibilities as boys.³⁰



Diagrams of mills from The Young Mill-Wright's and Miller's Guide by Oliver Evans, 1807. The Filson Historical Society

One former Indiana mill boy, for example, recalled in later life that a trip to the mill had to be undertaken about every ten days to two weeks to keep the family well supplied. “As soon as a boy was able to ride a horse well, and that was purty young,” he wrote later, “he was put on top of a two-bushel bag of shelled corn slung across the back of a horse,” accompanied by his father or an older brother. After learning the route and the best way to manage the horse and the bags of grain, the job fell to the boy alone, bringing with it both increased responsibilities and anxieties. He especially feared tearing the homemade linen sack and losing the family grain, but he also fretted about seeing an Indian or a panther while traveling alone, as well as wintry ice that might make the horse slip and the grain fall off. All the while he kept mind what were often the last words he heard before leaving home: “. . . don’t come home without meal.” He also recalled how he felt when his father told him he had to go to mill: “I’d have what I called mill pains.” Similarly, Branson Harris remembered that when he was old enough to go to the mill, his father would put a bushel and a half of grain in a sack, load the sack on a horse, and he would be made to ride sack and horse both. At the mill, Harris would stand on

a box in order to reach the crank to turn the bolting cloth. Another frontier farmer recalled in later years that during the time he attended school, he was “the main mill-boy” of his household and was frequently sent off with a sack of about two bushels to have ground.³¹

Despite the anxieties associated with going to the mill, the experience was not an altogether unpleasant one. The usual wait to have grain ground became

an opportunity for socializing with neighbors and friends. Boys could hope to meet up with a schoolmate performing the same chore for his household, and perhaps sneak off for an afternoon of swimming or fishing, or maybe engage in a scuffle in the mill yard for entertainment. The existence of a mill boy culture is also evident in one man's recollection that in an Indiana locality a number of them traveled the same path to the mill such that the owner of an apple orchard along the way "had a lively time in keeping mill boys out." But the mill yard offered something for adults, too. For older farmers driving a wagon to a mill, social interaction may have begun by offering to take a load of their grain for a neighbor. The mill yard served also as a place to trade gossip and information, coordinate exchanges of labor or uses of land, and to engage in political discussions. To one Morgan County, Indiana, pioneer these neighborly exchanges were especially meaningful, and he fondly recalled "those with whom I so often met and touched hands at the old mill."³²

Once families carried their grist home, it often passed into the hands of the household's women who produced many variations of corn mush, bread, and pone that served as the basis of the simple fare served in early Midwestern homes. In a letter written in 1836 to his family members who remained in Germany, Jacob Schramm, a farmer in Indiana, reported that his family ate corn bread three times a day. Similarly, Oliver Johnson reflected that he and his family "wouldn't a lasted long without corn meal." "Corn bread," he continued, "was the staff of life. For several years we had it in some form for breakfast, dinner and supper, never tirin [sic] of it." This was so in part as a result of the ease with which corn could be made into a tasty if simple meal. A corn dodger, for example, was made from mixing corn meal, water, and salt until it resembled a stiff dough that was then shaped into an oblong piece and baked. A more sophisticated and palatable dish, corn pone, entailed mixing scalded meal with milk or cream and some yeast, and then storing it in a warm place to rise before baking. This resulted in a lighter corn bread than the dodger. Lighter still, johnny cake consisted of a corn meal dough to which lard or butter had been added which produced something like a cake made from flour. Many households had a johnny board, two feet in length and eight to ten inches in width, with which to bake and turn the cake before the fire. According to one "Old Settler," this produced the "best bread ever made out of corn."³³

In sum, from ear on the stalk to grist at the mill to meal for the daily bread, corn was at the center of the agricultural and domestic economies in the early Midwest, connecting the region's people together in a unique way. These social relationships necessarily changed over time, influenced especially by improved market access by roads and canals, a rapidly increasing population, and technological adaptations that all led to larger harvests and greater profits. But throughout the history of the early Midwest, the core of social life

remained families and communities centered around mills, a cultural context in which economic development flourished in the countryside, indeed the center of the market revolution in the Early Republic. In this, the mill boys serve as a reminder today that bundled within the sheaves of the early Midwest's history lay revealing social and economic relationships that worked to build both local communities and a region. ♠

I would like to dedicate this article to my dissertation advisor (when we were both at Iowa State University) and friend, Doug Hurt.

1. John Scott, *The Indiana Gazetteer or Topographical Dictionary* (Centreville, Indiana: John Scott, 1826; reprint, Indianapolis: Indiana Historical Society, 1954), 98. Page references are to the reprint.
2. Beverley W. Bond, Jr., ed., "Dr. Drake's Memoir of the Miami Country, 1779-1794," *Quarterly Publication of the Historical and Philosophical Society of Ohio* 18 (April-September 1923): 56; Marie D. Fretageot to William Maclure, April 8, 1829, in Josephine Mirabella Elliott, ed., *Partnership for Posterity: The Correspondence of William Maclure and Marie Duclos Fretageot, 1820-1833* (Indianapolis: Indiana Historical Society, 1994), 578-80; James W. Patton, ed., "Letters From North Carolina Emigrants in the Old Northwest, 1830-1834," *The Mississippi Valley Historical Review* 47 (September 1960): 263-77; Daniel F. Ludewick to Father, Mother, Brothers . . . December 8, 1832, and Daniel F. Ludewick to Father, Mother, Brothers . . . December 15, 1834, reprinted in *ibid.*, 273, 276. Numerous early travelers to the region were struck by the land's obvious fertility and how this could translate into potential wealth. See Shirley S. McCord, *Travel Accounts of Indiana, 1679-1961* (Indianapolis: Indiana Historical Bureau, 1970). By Old Northwest and Midwest, I mean the region from which the future states of Ohio, Indiana, Illinois, Michigan, and Wisconsin emerged in 1803, 1816, 1818, 1837, and 1848 respectively.
3. The incipient commercial designs for the Old Northwest and emerging Midwest are discernible certainly in Indiana in several key areas including land policy, the internal improvement movement, territorial and state papers, and even in the conduct of Indian policy in the region. For more on this argument, see the forthcoming Ginette Aley, "Bringing About the Dawn: Agriculture, Internal Improvement, Indian Policy, and Euro-American Hegemony in the Old Northwest, 1800-1846," in Daniel P. Barr, ed., *The Boundaries Between Us: Natives, Newcomers, and the Struggle for the Old Northwest, 1740-1840* (Kent: Kent State University Press, forthcoming); Hildegard Binder Johnson, *Order Upon the Land: The U.S. Rectangular Land Survey and the Upper Mississippi Country* (New York: Oxford University Press, 1976); Peru *Gazette*, July 27, 1839, is reprinted in Walter R. Houf, "A Rural Indiana Weekly as Promoter: Editorials From the Peru Gazette of 1839," *Indiana Magazine of History* 65 (March 1969): 49. For a highly readable discussion of the struggle for control of the West, see Francis S. Philbrick, *The Rise of the West, 1754-1830* (New York: Harper and Row, 1965); an explanation of evolving land policy is John Opie, *The Law of the Land: Two Hundred Years of American Farmland Policy* (Lincoln: University of Nebraska Press, 1994); that landscapes have historically reflected a "common sense" of the people is described in John R. Stilgoe, *Common Landscape of America, 1580 to 1845* (New Haven: Yale University Press, 1982), ix-x, 3-7.
4. Midwesterners' historical subscription to the ideology of "progress" is noted in the excellent introductory essay in Andrew R. L. Cayton and Susan E. Gray, eds., *The American Midwest: Essays on Regional History* (Bloomington: Indiana University Press, 2001), 1-26.
5. Recent and not-so-recent historiography of early Midwestern milling is sparse, the topic usually eliciting only passing references, even in places one might expect to find more written about it. See John Mack Faragher, *Sugar Creek: Life on the Illinois Prairie* (New Haven: Yale University Press, 1986), 67-70; Malcolm J. Rohrbough, *The Trans-Appalachian Frontier: People, Societies, and Institutions, 1775-1850* (New York: Oxford University Press, 1978), 38-39, 104; Andrew R. L. Cayton, *Frontier Indiana* (Bloomington: Indiana University Press, 1996), 183; and R. Douglas Hurt, *The Ohio Frontier: Crucible of the Old Northwest, 1720-1830* (Bloomington: Indiana University Press, 1996). Susan Gray accurately identifies mills as part of the "essential local infrastructure," yet does not develop this statement and makes only short references to the difficulties in trying to obtain grist on the Michigan frontier as late as 1831 in Susan E. Gray, *The Yankee West: Community Life on the Michigan Frontier* (Chapel Hill: University of North Carolina Press, 1996), 28. Of recent early Midwestern studies James Davis goes the furthest in incorporating and contextualizing the significance of milling in frontier communities. See, for example, James E. Davis, *Frontier Illinois* (Bloomington: Indiana University Press, 1998), 108-09. Two important related though outdated studies of the region are John G. Clark, *The Grain Trade in the Old Northwest* (Urbana: University of Illinois Press, 1966) and R. Carlyle Buley, *The Old Northwest: Pioneer Period 1815-1840*, 2 vols. (Indianapolis: Indiana Historical Society, 1950). In defining a community I agree with Faragher who asserts, "Communities operate through direct, face-to-face connections between people" and comprise a set of "different kinds of relationships," in Faragher, *Sugar Creek*, 144, 155.
6. John M. Wasson, *Annals of Pioneer Settlers on the Whitewater and its Tributaries* (Richmond, Indiana: Press of the Telegram Printing Company, 1875), 48; Oliver Johnson, *A Home in the Woods, Pioneer Life in Indiana: Oliver Johnson's Reminiscence of Early Marion County* (Indianapolis: Indiana Historical Society, 1951), ch. 8; Gerald E. Waite, "Grist Mills of Delaware County, Indiana," *Indiana Magazine of History* 95 (December 1999): 365.

7. John T. Schlebecker, review of *Shucks, Shocks, and Hominy Blocks: Corn as a Way of Life in Pioneer America* by Nicholas P. Hardeman, *American Historical Review* 87 (1982): 536-37.
8. John D. Barnhart and Donald F. Carmony, *Indiana: From Frontier to Industrial Commonwealth*, Vol. 1 (New York: Lewis Historical Publishing, 1954), 345; Thomas Dean's 1817 travel narrative is excerpted in McCord, *Travel Accounts of Indiana*, 81-85. See also Nicholas P. Hardeman, *Shucks, Shocks, and Hominy Blocks: Corn as a Way of Life in Pioneer America* (Baton Rouge: Louisiana State University Press, 1981).
9. Theodore Calvin Pease, ed., *The Laws of the Northwest Territory, 1788-1800* (Springfield: Trustees of the Illinois State Historical Library, 1925), 366-68; Francis S. Philbrick, ed., *The Laws of Indiana Territory, 1801-1809* (Springfield: Trustees of Illinois State Historical Library, 1930), 133-37, 361; Louis C. Hunter, *A History of Industrial Power in the United States, 1780-1930*, Vol. 1, *Water Power in the Century of the Steam Engine* (Charlottesville: University Press of Virginia, 1979), 41; Louis Filler, ed., "Prevailing Manners and Customs on the Frontier: The Memoirs of Irenè Hardy," *Ohio History* 86 (Winter 1977): 50.
10. William M. Cockrum, *Pioneer History of Indiana Including Stories, Incidents and Customs of the Early Settlers* (Oakland City, Indiana: Press of Oakland City Journal, 1907), 323-24; Mary Byram Wright, "Personal Recollections of the Early Settlement of Carlinville, Illinois," *Journal of the Illinois State Historical Society* 18 (October 1925): 683; Pease, *Laws of the Northwest Territory*, 361-62; Hunter, *History of Industrial Power*, 13, 47; Logan Esarey, "The Pioneers of Morgan County: Memoirs of Noah J. Major," *Indiana Historical Society Publications* 5 (1915): 424; William Cooper Howells, *Recollections of Life in Ohio, From 1813 to 1840* (Cincinnati: Robert Clarke Co., 1895), 137. A good primary description of one neighborhood's horse mill is found in Robert B. Duncan, "Old Settlers," *Indiana Historical Society Publications* 2 (1894): 378-79. Many of the period's farm journals contain drawings of horse mills such as that found in "Booth's Cider Mill," *The* (Albany, New York) *Cultivator* (July 1840): 109. For an explanation of how a horse mill operated in the early Midwest, see Branson L. Harris, *Some Recollections of My Boyhood* (Indianapolis: Hollenbeck Press, n.d.), 7.
11. Pease, *Laws of the Northwest Territory*, 366; Hunter, *History of Industrial Power*, 14.
12. Philbrick, *Laws of Indiana Territory*, 362-63, 366. The custom is described in Esarey, "Pioneers of Morgan County," 425, and Johnson, *A Home in the Woods*, 66.
13. Cockrum, *Pioneer History of Indiana*, 325-26; "Early Attempt at Settlement," *American Pioneer* 1 (February 1842): 52.
14. Typical of the laudatory depictions of enterprising millers is Esarey, "Pioneers of Morgan County," 415-26; Cockrum, *Pioneer History of Indiana*, 324; "Annual Message," December 9, 1818, is reprinted in Logan Esarey, ed., *Messages and Papers of Jonathan Jennings, Ratliff Boon, William Hendricks*, Vol. 3, 1816-1825, (Indianapolis: Indiana Historical Commission, 1924), 68.
15. The Midwest's canal era has not been a subject of social history, but see Cayton, *Frontier Indiana*, 281-85, Paul Fatout, *Indiana Canals* (West Lafayette, Indiana: Purdue University Studies, 1972), and Ronald E. Shaw, *Canals For a Nation: The Canal Era in the United States 1790-1860* (Lexington: University Press of Kentucky, 1990), chs. 5 and 6. Portions of Titus' 1843 journal are excerpted in George P. Clark, ed., "Through Indiana by Stagecoach and Canal Boat: 'The 1843 Travel Journal of Charles H. Titus,'" *Indiana Magazine of History* 85 (September 1989): 217.
16. Howells, *Recollections of Life in Ohio*, 138-39.
17. In an 1846 letter to his German family overseas, Johann Wolfgang Schreyer of Marshall County, Indiana, explained that "[m]ost of the grain is sold at the mill" where millers "pack the flour in barrels and send it over the canals to the harbors." See Johann Wolfgang Schreyer to [?], June 22, 1846, reprinted in Donald F. Carmony, ed., "Letter Written By Mr. Johann Wolfgang Schreyer," *Indiana Magazine of History* 40 (December 1944): 294. See also Esarey, *Pioneers of Morgan County*, 423; and James B. Lewis, "The Pioneers of Jefferson County: Reminiscences," *Indiana Magazine of History* 12 (September 1916): 224. By emphasizing the interconnectedness and interdependence between producers and processors in stimulating the development of the Midwest, my interpretation challenges Kim Gruenwald's characterization of the contributions of farmers, particularly her lumping of them in the same category as speculators and trailblazers in the Ohio Valley. Offering a somewhat elitist perspective, she contends that "it would be the commercial connections created by merchants that lay the foundation for the new United States' continental empire." In reality, the connections were only a means to facilitate the movement of products within a nexus of producers, consumers, and the market. The commercial origins of the Midwest lay not with merchants, but with agriculturists. See Kim M. Gruenwald, *River of Enterprise: The Commercial Origins of Regional Identity in the Ohio Valley, 1790-1850* (Bloomington: Indiana University Press, 2002), xi-xvi, 3-6.
18. Ezra Ferris to Mr. Torbet, 18 February 1851, reprinted in Ezra Ferris, "The Early Settlement of the Miami Country," *Indiana Historical Society Publications* 1 (1897): 275-76. Other examples of crude milling apparatuses from roughly the same time and place include a horse-powered mill made from timber, stone, and buffalo hides, and one built on two large dug-out canoes with the wheel set between them. These descriptions are found in "Early Attempt at Settlement," *American Pioneer*, 58-59.
19. Hunter, *History of Industrial Power*, 8-9.
20. Ibid., 10-14; Bernhard Knollenberg, *Pioneer Sketches of the Upper Whitewater Valley, Quaker Stronghold of the West* (Indianapolis: Indiana Historical Society, 1945), 21; Filler, "Prevailing Manners and Customs," 48-49; Jacob Schramm to Brother-in Law and Sister-in-Law, April 10, 1836, reprinted in Emma S. Vonnegut, trans. and ed., *The Schramm Letters, Written by Jacob Schramm and Members of His Family From Indiana to Germany in the Year 1836* (Indianapolis: Indiana Historical Society, 1935), 66. Ohio frontierswoman Anna Bentley remarked on this community commitment in an 1826 letter, telling her correspondent, "They have a custom here in harvest or other busy times to collect as many neighbors as they can, and they will pay back in work," in Emily Foster, ed., *American Grit: A Woman's Letters From the Ohio Frontier* (Lexington: University Press of Kentucky, 2002), 38.
21. The story of the northern Illinois boys is from a privately held diary that is quoted in Hunter, *History of Industrial Power*, 13-14. The daily needs of grinding estimate is also in *ibid.*, 9; Filler, "Prevailing Manners and Customs," 49-50.
22. Harris, *Some Recollections of My Boyhood*, 9; Johnson, *Home in the Woods*, 74; Schramm, *Schramm Letters*, 49; Wright, "The Early Settlement of Carlinville, Illinois," 683. For more on the hardship of distance, see Joseph Wheeler Walker, "Hoosier Pioneers," *Indiana Magazine of History*

- 20 (March 1924): 66-67; John B. Conner, *Agricultural Resources and Development of the State* (Indianapolis: Wm. M. Burford, 1893), 14; Wasson, *Annals of Pioneer Settlers*, 28; Hunter, *History of Industrial Power*, 12; and Davis, *Frontier Illinois*, 108-09. As historian Louis Hunter has observed, the story of going to mill consistently appears in nearly every nineteenth century account of the frontier and therefore should be considered "a way of life," at least for a time.
23. Esarey, "The Pioneers of Morgan County," 415, 424-25; *The* (Albany, New York) *Cultivator*, July 1840 and Madison *Indiana Republican*, May 1831, reprinted in Herbert Anthony Kellar, *Solon Robinson, Pioneer and Agriculturist* (Indianapolis: Indiana Historical Bureau, 1936), 46; *Peru Gazette*, October 5, 1839, reprinted in Houf, "Rural Indiana Weekly as Promoter," 55. *Peru* promoters hoped that the newly cultivated fields carved out of the wilderness of the early Midwest by the settler-farmers would bring "civilization" in the form of improvements and more settlers to the country, and all would prosper. See also Donald Zochert, "Illinois Water Mills, 1790-1818," *Journal of the Illinois State Historical Society* 65 (Summer 1972): 173-83.
24. Clarence Edwin Carter, ed., *The Territorial Papers of the United States*, Vol. 7, (Washington, D.C.: U.S. Government Printing Office, 1934-1969), 7-10; William Wesley Woollen, et al., *Executive Journal of the Indiana Territory, 1800-1816* (Indianapolis: Bowen-Merrill Co., 1900), 82-85. Indiana Territory's Native American population in 1800 was estimated at about 100,000 in Homer J. Webster, "William Henry Harrison's Administration of Indiana Territory," *Indiana Historical Society Publications* 4 (1907): 189; Hunter, *A History of Industrial Power*, 38. The ratio noted here also points toward a distinctiveness with regards to the geography of the relationship between producer and processor among Midwest settlers as opposed to eastern frontier settlers. William Wyckoff argues, for example, that frontier New York settlers had their milling needs met locally, and that "often only a short distance separated miller and customers." See William Wyckoff, "Frontier Milling in Western New York," *Geographical Review* 76 (January 1986): 73-93.
25. It should be noted, however, that because of incomplete and inconsistent enumerations both within and across the census years, the data can not really be considered as anything more than suggestive of the emerging rural economy. From his research on Delaware County, Indiana, grist mills, for example, Gerald Waite believes that census figures pertaining to milling "may be deceptively low" in the recording of kinds of mills, the number of milling establishments, and output and market value of the processed grain. Certainly, any perusal of pioneer accounts will substantiate Waite's contention, as many discuss not just the large mill yards that would have been easy to identify by census takers, but also the more numerous small and neighborhood mills that would no doubt have escaped enumeration. Waite, "Grist Mills of Delaware County," 367, 370. Waite is not alone in his contention about the under-representation of mills. See Hunter, *A History of Industrial Power*, 38.
26. U.S. Treasury Department, *A Statement of the Arts and Manufactures of the United States of America for the Year 1810* (Philadelphia: A. Cornman, 1814), 162-65; U.S. Census Office, *Digest of Accounts of Manufacturing Establishments in the United States and of their Manufactures* (Washington, D.C.: Gales and Seaton, 1823), 30-31; U. S. Census Office, *Aggregate Value and Produce, and Number of Persons Employed in Mines, Agriculture, Commerce, Manufacturing, etc.* (Washington, D.C.: Blair and Rives, 1841), 340, 354-55. An excellent explication of the development of Indiana's agriculture and manufacturing prior to 1850 is found in Barnhart and Carmony, *From Frontier to Industrial Commonwealth*, ch. 20.
27. Paul W. Gates, *The Farmer's Age: Agriculture 1815-1860* (Armonk, New York: M.E. Sharpe, Inc., 1960), ch. 8; Howells, *Reflections of Life in Ohio*, 155-56. Winnowing by the sheet is also described by an Indiana pioneer in Branson, *Some Recollections*, 25-26.
28. Gates, *The Farmer's Age*, 169-72; William Oliver, *Eight Months in Illinois with Information to Immigrants* (Newcastle-upon-Tyne: W.A. Mitchell, 1843 [1924 reprint of an edition originally published in Chicago by W.M. Hill] (Carbondale: Southern Illinois University Press, 2002), 73-76. (Page references are to 2002 edition.)
29. Cayton, *Frontier Indiana*, 178-79; Howells, *Recollections of Life in Ohio*, 156-57. The 1822 manufacturing census captured child labor as well. In it, a separate category of "Boys and Girls Employed" enumerated five children working in grain mills in Indiana, and two in Illinois. Presumably, inasmuch as it is widely recognized that mills were undercounted, certainly, so too was child mill labor. See U.S. Census, *Digest of Accounts of Manufacturing Establishments*, 30-31.
30. Filler, "Prevailing Manners and Customs," 49-50.
31. Johnson, *A Home in the Woods*, 66-71; Harris, *Some Recollections of My Boyhood*, 9; Wasson, *Annals of Pioneer Settlers*, 48.
32. Wasson, *Annals of Pioneer Settlers*, 48; Harris, *Some Recollections of My Boyhood*, 8-9; Esarey, *Pioneers of Morgan County*, 420-21.
33. Schramm, *The Schramm Letters*, 67; Johnson, *A Home in the Woods*, 28-29; Duncan "Old Settlers," 383-84. Numerous accounts describe eating lye hominy as in Wasson, *Annals of Pioneer Settlers*, 11. See also Harris, *Some Reflections of My Boyhood*, 6, and Walker, "Hoosier Pioneers," 76-77.