

Chapter 14

An Economic Approach to Religious Communes: The Shakers



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Abstract The Shakers were a religious society well known for their commitments to celibacy, pacifism, joint ownership of property, and communal lifestyle. John E. Murray wrote the first economic analysis of the Shakers in his Ph.D. dissertation in 1992. Proposing that Shaker membership and prospective entrants responded to the incentives created by the difference between Shaker and worldly living standards, he developed a model of community formation and faith requirements, quality of life, and entry and exit behavior. He tested the implications of the model by using demographic, epidemiologic, anthropometric, and economic data recovered from Shaker manuscripts. He went on to write a series of articles, some coauthored by Metin Coşgel, which examined various aspects of the Shaker lifestyle and business organization. These articles showed that membership decisions within Shaker communal societies were influenced by both religious belief and economic incentives; despite communalism, Shaker farms and shops generally performed just as productively as their neighbors; the organization of Shaker communes under the Family system was a compromise that balanced communal ideals with the costs of motivation and coordination; eastern and western Shakers farmed in ways that were more similar to their neighbors than to each other; and Shakers' dairy operations were just as productive as nearby family farms or larger commercial operations. This essay examines these topics in a coherent manner with the dual objective of discussing Murray's contributions to the literature and uncovering the basic elements of an economic approach to understanding the behavior, organization, and relative performance of the Shakers.

Keywords Shakers · Religious commune · Living standards · Incentives · Membership · Productivity

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14.1 Introduction

The Shakers were a religious society well known for their commitments to celibacy, joint ownership of property, and communal lifestyle. John E. Murray wrote the first economic analysis of the Shakers in his Ph.D. dissertation in 1992. Proposing that Shaker membership and prospective entrants responded to the incentives created by the difference between Shaker and worldly living standards, he developed a model of community formation, living standards, and entry and exit behavior. He tested the implications of the model by using demographic, epidemiologic, anthropometric, and economic data recovered from Shaker manuscripts.

Murray went on to write a series of articles on the Shakers, some coauthored by Metin Coşgel, which examined various aspects of the Shaker lifestyle and economy. These articles showed that membership decisions within Shaker communal societies were influenced by both religious belief and economic incentives; despite communalism, Shaker farms and shops generally performed just as productively as their neighbors; the organization of Shaker communes under the Family system was a compromise that balanced communal ideals with the costs of motivation and coordination; Shakers' dairy operations were just as productive as nearby family farms or larger commercial operations; and eastern and western Shakers farmed in ways that were more similar to their neighbors than to each other. This essay will examine the living standards and membership selection in Shaker societies and the organization and market integration of their businesses, with the dual objective of outlining the basic elements of an economic approach to the Shakers and discussing Murray's contributions to the literature.

14.2 The Shakers

The Shakers, whose official name was the United Society of Believers in Christ's Second Appearing, were (and are, but since John Murray's research was focused on the Shakers of the past, the past tense will be used here) a Christian communal society. Their distinctive religious beliefs included celibacy, pacifism, sexual equality, communal lifestyle, and joint ownership of the Society's assets. They were inspired by their foundress, an unlettered Englishwoman named Ann Lee, to live celibate lives, confess sins to elders, and pray in such a way as to experience direct contact with the divine. They believed in the existence of a male and female Godhead, from which followed sexual equality. Early in the Society's history, they adopted a form of communalism, in which all assets were owned jointly and Believers (a Shaker term for members of the sect) worked for the community without wages. Each community was further divided into Families which were essentially autonomous and consisted of 50 to 100 Shakers. Economically, the Shakers aimed at balancing the isolation that promoted their unusual brand of spiritualism and the interaction with worldly markets that provided goods they needed to maintain their community, but were unable to make themselves.

The Shakers were originally founded in England in the 1740s and then established in the United States in the 1780s. They were among the most successful of the hundreds of American communal societies that survived long enough to leave some historical record. By the year 1800, the Believers numbered 1373 and maintained 11 communities in New York and New England. In 1850 the US census recorded the greatest number of Shakers, when 3842 members lived in 21 communities located between Maine and Kentucky. Since then, their numerical decline has continued as members left or died without replacements by new converts. Only 12 Shaker communities were left in 1920. Many communities were abandoned to become museums, schools, and state prisons. The only active Shaker community today is in Sabbathday Lake, Maine, with a few remaining members.

Shaker history presents numerous interesting puzzles and important questions to an economist. Shaker communalism, for example, meant that Believers and prospective Believers responded to a different set of incentives than other people. Celibacy likewise put a significant barrier to their ability to grow through procreation. Their distinct beliefs had direct implications for their membership makeup and economic performance. As Murray (1992: 3-4) asked in his Ph.D. dissertation, “[w]ho were the Shakers? What were they like in non-spiritual terms? Had they different levels of human capital from other contemporary Americans? How did they change between 1790 and the end of the nineteenth century? Why did they become Shakers? Why did some choose apostasy and others remain? How well did they live, and how did that affect recruiting and retention?” Starting with these questions, Murray set out to develop an economic approach to the Shakers and wrote a series of articles, some coauthored by Metin Coşgel, which examined the living standards and skill composition of the Society’s membership and the organization and market integration of its businesses.

14.3 Living Standards

Certain distinctive features of the Shaker lifestyle had direct implications for the health and living standards of Believers. Communal life and religious practices meant that hundreds of Believers constantly lived and worshipped in close proximity to each other, making Shaker villages more susceptible than other communities to the spread of infectious diseases. Epidemic disease could enter the community through Shaker interactions with neighbors and travels to nearby towns and far cities. Although their villages were typically set off in rural areas, the Shakers were never completely isolated from the outside. The celibacy condition required their leaders to venture out to recruit new members to ensure the continuity of their membership. Believers frequently traveled outside to conduct legal affairs and business transactions. They bought equipment, grains, and raw materials from outside businesses and sold in outside markets their seeds, brooms, furniture, medicinal herbs, and other products that were in high demand.

We have much to learn from studying the health and disease environment of the Shakers. In nineteenth-century America, diseases like pulmonary tuberculosis (the “white plague”) could have a devastating impact on communal societies like the Shakers. Despite recent medical improvements, such diseases continue to assert their importance today, as the recent COVID-19 outbreak has shown. Crowded situations in contemporary schools, workplaces, social gatherings, and care facilities have much in common with the Shaker communities in spreading infectious diseases. By studying Shaker attitudes and actions toward such diseases, we would gain important insights into the effectiveness of various public health measures for prevention and treatment.

Murray (1994) used surviving records of three representative communities (in terms of size and geography) to study tuberculosis in Shaker communities in the nineteenth century. He focused on nutrition, sanitation, and isolation as the three factors that have been proposed in the literature to explain differences in tuberculosis mortality. His results showed that Believers of the mid-nineteenth century died at elevated rates from tuberculosis. The differential was probably unrelated to diet because the Shaker diet was adequate. Likewise, the sanitary environment was unlikely to be a factor, or even a factor in favor of the Shakers, because of their attitudes toward cleanliness and availability of clean water. The likely source of the problem, according to Murray, was isolation, because the Shakers did not (or could not) isolate infected members. He found that the rise and fall of tuberculosis mortality in Shaker communities was closely related to the rise and fall of population in their villages. This finding suggests that the decline of the disease in the nineteenth century was a function of the decline of crowded living spaces.

If certain Shaker practices or the realities of communal life led to disease problems, did Believers have shorter lives than non-Shakers? Contrary to this implication, the Shakers themselves claimed to have longer lives due to their distinct lifestyle, as recorded in their pamphlets and interviews with outsiders. Using techniques of demography and epidemiology, Murray (1993a) compared health conditions and mortality in some nineteenth-century Shaker communes with other contemporary populations. As primary sources, he used available membership, population, and death records of representative Shaker communities and the journals kept by their physicians.

The results showed that Shakers did indeed live unusually long lives, as seen in three different measures: age at death, expected years of life at age 20, and age-adjusted mortality rate. Comparing age at death for samples of Shakers and various rural New Englanders (for which comparable data are available from cemetery gravestones and town vital records) showed that New England Shakers died at later ages than a small sample of contemporary Massachusetts residents during the period between 1784 and 1830. Because mean age at death can be a misleading mortality statistic (especially since Shakers’ celibacy excludes infant mortality), Murray looked at another statistic for confirmation, namely, expected years of life at age 20. Comparing life expectancy of this age group of Shakers with known statistics regarding other cohorts around the world showed that young Shakers could expect to live at least a decade longer than others, a surprisingly large differential. Finally,

Murray looked at differences in death rates for another comparison of mortality. Although Shaker communities had higher crude death rates than Massachusetts, this was the result of unusual Shaker demographic structure skewed toward older adults. Comparisons of age-adjusted mortality rates indicated higher longevity among the Shakers.

Notwithstanding the distinctive features of the Shaker lifestyle, can we utilize their archival records to learn about the living standards of the general population? Since direct quantitative information on the well-being of the general population is not available for historical studies, scholars have used stature as a proxy measure. This information, however, may be biased because they are typically derived from the records available for samples of students, soldiers, or slaves. To determine whether these samples are representative of the general population, we need to compare them with other samples. Moreover, since some of these samples are exclusively for males or children, an ideal comparison would be with a sample that includes adult females.

Findings regarding the stature of a sample of Believers might provide a useful comparison with the sample of students, soldiers, and slaves. Since the Shakers practiced celibacy, most individual members joined as adults who grew up outside the commune. Their stature thus likely represented more the living standards of their childhood conditions than the unique features of the Shaker lifestyle. In addition, a sample of Shakers would include adult females.

Murray (1993b) studied stature of men, women, and children who lived in a Shaker commune near Albany, New York, between 1840 and 1865. He examined how heights changed over time within this Shaker community, varied among age and gender groups, and compared with other non-Shaker samples. He found that Shaker men were about the same height as male slaves but shorter than Union Army soldiers. Over time, men's heights followed a similar trend to that observed in the Union Army, specifically a U-shaped trend between the late eighteenth century and the 1830s, followed by a decline. Interestingly, the trend for adult women was instead a long decline throughout the first half of the century, as successive birth cohorts became generally shorter over time, associated with the influx of shorter urban women. Shaker women were much shorter than Shaker men, likely a reflection of broader sexual differences in net nutrition. Shaker children were shorter than children in samples for later American populations.

14.4 Membership

The distinctive Shaker practices of celibacy and communalism had direct implications for the levels and duration of membership and their demand for nonmember labor. Given the restrictions imposed by celibacy and the incentive problems created by equal compensation of members under communalism, we would expect membership levels and duration in Shaker communes to decline, proportion of illiterate members to rise, and employment of nonmembers to increase, over time.

Decisions of individual Shakers were influenced by both religious beliefs and economic incentives. Although this clearly presented free-rider problems for Shaker communalism, the Society did not screen out prospective members who might have been attracted purely for pecuniary reasons or those who had little to contribute to productive activities. Preferring open membership, the Shakers rarely rejected potential entrants or expelled existing members. Entry and exit decisions typically belonged to individual members.

To test the implications of free entry and exit for the levels and duration of Shaker membership, Murray (1995a) used population data from the Church Family at the New Lebanon Shaker Community, near Albany, New York, for the period between 1785 and 1882. These data provide entrance and exit dates on individual members, from which changes in levels of overall population over time can be calculated. Using this information, Murray investigated whether the skill levels of entrants to Shaker communities declined over time and whether they were successful in keeping young members in the sect.

The results showed that the New Lebanon Church Family suffered from three types of membership problems. First, over time new recruits increasingly came from the largest urban areas of the United States and Britain. Less well suited for life on a rural commune, these members were significantly less likely to persist as Shakers than those who came from rural areas and small towns. Second, the Society was unable to deal with the “second-generation problem.” Although adults chose to join the Shakers as converts, children either entered with their parents or were picked up from the outside as orphans or apprentices. The likelihood of staying longer in the community was greater for adults than children, confirming the greater importance of choice over socialization for membership continuity. Finally, membership in the community was influenced by economic fluctuations in the greater American society. When the economy took a downturn, the community’s population increased. Men (but not women) who joined during economic downturns were less likely to persist as members.

Another important implication of Shaker communalism concerned the levels of skills and productivity among Believers. Although religious beliefs were important in affecting people’s decision to join the Shakers, the incentive structure created by equal compensation of members could also be a factor. In general, if everyone received the same return in team production, we would expect those with low marginal productivity to join the team and those with high productivity to leave for better opportunities, consequently causing the average productivity of the team to fall over time. Regarding the Shakers, we would expect average levels of skills and productivity to fall among Believers over time, a problem of adverse selection caused by their commitment to communalism.

To test for the presence of adverse selection in Shaker communities, Murray (1995b) studied levels of literacy among Believers as an indicator of human capital. Based on the association between human capital and marginal productivity, he examined how Shaker literacy rates changed over time and differed from those of people in nearby areas. To determine literacy among the Shakers, he looked at whether Believers signed their names on certain documents, specifically covenants

and entrance agreements, of the North Union, Ohio, and South Union, Kentucky, communities for which manuscripts are available to determine signature literacy.

The results showed that economic incentives adversely affected membership decisions for the Shakers. Although early Shakers were literate and highly skilled individuals, average literacy rates declined over time. New members were less literate than established Believers as well as people in nearby areas. These findings indicate that the changing quality of members over time may have been the main cause of the numerical decline of the Society in the nineteenth century.

Yet another consequence of the Shaker lifestyle concerned the relationship between Believers and nonmember labor. The Shakers often hired outside workers to perform a variety of tasks in their farms and businesses, as did many other religious and secular communal societies. Hiring nonmember workers, however, may pose problems for a collective organization, especially one formed for ideological reasons, because nonmembers may respond to different incentives than do members. This may cause a dilution of the group's values and a decline in membership over time, eventually causing the group's demise.

Murray (2000) examined the Shaker practice of hiring nonmember workers to determine whether the numbers of hired hands increased over time and whether employing nonmembers raised the risk of communal dissolution. He used data on Shaker hiring of outsiders in the nineteenth century from two different types of sources, namely, the manuscripts and account books of the Shakers themselves and a survey published by Charles Nordhoff that recorded the numbers of Shakers and hired hands employed by all Shaker communities in 1874.

Shaker employment records from early in the nineteenth century and the 1874 survey suggest that the Society indeed employed greater numbers of outsiders over time. Regarding the impact of this employment on Shaker membership, however, Murray's (2000) analysis of anecdotal and survey evidence did not find an association between outside labor and communal decline. The findings showed that the Society hired nonmembers from early in Shaker history and that such employment was complementary to Shaker labor, with no adverse effects on communal values and membership persistence. Indeed, surprisingly, the results showed that greater employment of hired hands led to decreased probabilities of community dissolution.

14.5 Productivity, Organization, and Land Accumulation

The Shakers met numerous economic and political constraints in implementing their religious ideals in the real world. Coşgel and Murray examined three specific examples of the way such constraints affected the Shaker economy. First, communal sharing presented a classic example of an incentive problem in production. Since Believers shared the fruits of each other's productive activities, they could face inadequate incentives to work hard. Second, the Society similarly had to carefully balance religious ideals with economic concerns in determining the scope of

communal sharing. Although all members would ideally live, work, and consume together in each community, this would be less feasible as the size of membership grew, raising the question of how best to maintain communal sharing in larger communes. Third, as Shaker communities grew, they had to deal with challenges caused by large amounts of accumulated land over time. For example, they had to take controversial positions regarding policy proposals for land reform and faced questions regarding land use as membership declined. Focusing on the interaction of religious and economic concerns in Shaker communities, Coşgel and Murray wrote a series of essays to examine implications regarding the productivity of their business operations, the organization of communes, and the accumulation of land, as detailed below.

A comparison of Shaker farms and businesses with their neighbors would provide broad insights regarding the relative productivities of communes and conventional producers. Unlike a conventional firm, a commune distributes output to its members according to rules, such as equal sharing, that do not depend on members' effort. Because this independence between income and effort creates a potential for an incentive problem, those who emphasize the role of incentives on productivity would argue that a conventional firm should be more productive than a commune, all else being equal. Those who consider the presumptions of the standard theory as being inapplicable to communes, on the other hand, might argue that work incentives in a commune, shaped by such things as a communal work ethic and interdependence, are adequate to prove a commune to be just as productive, if not more, as a conventional firm.

To compare the productivity of Shaker farms and enterprises with other producers, Coşgel and Murray (1998) used information recorded in the enumeration schedules of the US agriculture and manufacturing censuses. Available for the period between 1850 and 1880, this information makes it possible to identify the Shaker entries in the schedules and to construct a random sample of other farms and shops for a comparison based on consistent data. Because the comparison sample is drawn from the schedules of the same townships as the Shakers, these neighboring farms and shops faced similar local constraints. Coşgel and Murray (1998) estimated the average productivities of the two groups of producers, identified and controlled for consistent nonorganizational differences between them that might have affected their relative productivities, and assessed the role of organizational differences.

The results provide support to the contention that communes need not always suffer from reduced productivity. Shaker farms and shops generally performed just as productively as their neighbors; when differences did exist between their productivities, there are good reasons to attribute them to factors other than the organizational form.

An important dilemma faced by growing communes is whether to maintain sharing in a single commune or break into a network of smaller independent units. Although the latter option might be more efficient from an organizational perspective, economic independence might have adverse consequences for the fundamental communal principles within the whole network since some communes may own more wealth or generate more income per member than do the others. Given the

potential for such a conflict with communal principles, questions arise as to whether and why a commune might choose an organizational structure of a network consisting of economically independent units and what the consequences would be for inequality among units.

During the nineteenth century, the Shakers established several communities in seven states. A distinct feature of the Shaker organization of communes was to further divide each community into economically independent subdivisions called "Families." The Shakers faced a trade-off of sorts. One large commune for all Shakers, at least for each community, would have better matched communal ideals. Costs of motivation and coordination associated with the carrying out of economic activities, however, would have risen with group size. The compromise of several smaller Families within the larger community balanced these costs. Moreover, incentive effects and distribution costs prevented the Shakers from establishing a formal distribution mechanism that could have transferred resources across Families toward greater equality.

Using data from the 1850, 1860, and 1870 US census enumeration schedules, Coşgel et al. (1997) estimated the wealth and income per capita of Shaker Families in order to examine the consequences of the Shaker organizational structure of a network of independent Families. The results showed that both wealth and income per capita differed substantially across Shaker communities and even among Families within the same community. That is not to say that the Shakers failed entirely to meet their communal principles; in fact there is every reason to believe that distribution was very equitable within each Family and that the distribution of Shaker wealth and income was much more equal than the distribution in the fallen "World." But strict application of communal principles and complete distributional equality among all Shakers could have been achieved only at very high costs in the face of growing membership.

Another important dilemma faced by growing communes is whether to live by their communal principles within the larger economy, especially in land ownership. True, the Shakers held their land and its products in common, with no private property among the members. But their position within the larger economy presented an anomaly by the late nineteenth century, because they had become local monopolists with ownership of thousands of acres of land on which ever fewer Shakers were available to work. Whereas Shaker land policies attracted the attention of fearful neighbors and state legislators early in the nineteenth century, the large size of their land holdings became an increasingly urgent issue within the Society in the later nineteenth century as membership declined.

Murray (1996) studied the Shaker dilemma regarding land ownership in the late nineteenth century. To discern the evolution of the Society's attitudes, he focused on the writings of prominent Shaker elder Frederick W. Evans regarding the single tax proposal of Henry George. Evans wrote numerous pamphlets and letters to newspapers urging both the Society and the outside world to adopt George's ideas. He believed that the single tax proposed by George offered the possibility of more equitable land distribution. As another motivation, he believed that these proposals would help with the Society's own dilemma. Whereas the Shakers had successfully

resisted proposals for quantitative restrictions on land ownership while they were growing early in the century, they were now in an uncomfortable position suffering from the result of their collective selfishness. Recognizing the increasing burden of Shaker land holdings and the inability of the Society to find a solution on their own, Evans ardently supported the land reform proposals of Henry George to curb their land hunger.

14.6 Market Integration and Specialization

With respect to external markets, the Shakers had originally sought separation from the outside world and economic self-sufficiency, as has been common among religious communes. To remain truly untouched by the “World,” however, they would have needed an economic self-sufficiency that would spare them from having to trade with outsiders for various necessities. This ideal was never quite realized. Like any other economic agent, the Society produced goods that others would accept in trade, in addition to producing goods that were for their own consumption, to obtain what they wanted but could not (or chose not to) make themselves. The Society’s integration with the markets raises important questions regarding how Shaker religious beliefs influenced production decisions, whether Shaker communities differed in regional specialization, and how their market behavior changed over time.

Murray and Coşgel (1998) examined the influence of Shaker religious beliefs on production decisions, specifically in swine raising. The Shakers raised hogs because they were enthusiastic pork eaters. Up to the 1840s, the Shakers made pork production decisions based on market information. Despite limited involvement in pork factor and product markets, they processed available price information efficiently and acted as economic theory would predict. They also made systematic efforts to increase meat yields through breeding and creative slaughtering.

Then in 1841 a ban was placed on pork as “cursed and unclean,” a foodstuff that was “positively unfit for the children of Zion.” Despite the evident pleasure that consumed pork provided to the Shakers and the care with which they made pork production decisions, the society as a whole grappled with the issue of banning pork consumption throughout the 1840s. While some communities obeyed the ban immediately, others continued to raise swine and produce pork throughout the nineteenth century. The Shakers were unable to end pork production altogether, in large part because of the demands of hired hands for pork. Western Shakers, for example, seem to have obeyed the prohibition on eating pork themselves, even while continuing to produce it for consumption by others.

Murray and Coşgel associated the uneven acceptance of the ban not with strictly economic motivations but with more general cultural issues. Overall, the results showed a complex of motivations that influenced the decision of whether and how much pork to produce. The fact that prices were one influence among several is not a sign of their unimportance but rather evidence that, even in relatively isolated communes dedicated to things otherworldly, the influence of the worldly economy was considerable.

Another business in which Shaker religious beliefs could influence production decisions and performance was dairy farming. Shaker dairies produced milk, butter, and cheese for the Shakers' own consumption and milk and cheese for sale, and the Shakers lavished considerable effort to expand dairy production through careful breeding of livestock and ingenious design of barns. Market integration of the Shakers in dairying raises interesting questions about how their religious beliefs affected production decisions and performance.

To analyze Shaker dairy operations and compare their productivity with other farmers, Murray and Coşgel (1999a) used data from the Shaker manuscript record and the enumeration schedules of the federal agricultural censuses. The results showed that the Shakers made production decisions consistent with positive supply elasticities, based on prices formed in nearby markets from the beginning of data series in the 1830s. Regarding comparative productivity, the authors found that at the middle of the nineteenth century, Shaker dairies produced more milk per cow than ordinary family-run dairies, even in the most important dairying states. Further, regression analysis showed that the greater Shaker productivity remained at midcentury.

After midcentury, the Shakers adopted religiously inspired production restrictions (i.e., the ban on lard, with implications for increased demand for butter) and, as a result, stopped basing their decisions on price signals. The decline in dairy productivity that followed this move mirrored the Shakers' numerical decline. Faithfulness to commands of the spirit was not without costs. Although the Shakers responded to price signals, they clearly were not a profit-maximizing firm in the usual sense of that phrase. Their religious beliefs, and the practices that flowed from them, constrained them in their consumption and hence in their production.

In specialization and crop choices, did the Shaker communities in different regions resemble each other or the non-Shaker farms and businesses around them? When the Shakers expanded westward and established communal farms in the Ohio Valley, they encountered a new agricultural environment that was substantially different from the familiar soils, climates, and markets of New England and the Hudson Valley. Despite the regional diversity among Shaker settlements, Murray and Coşgel (1999b) noticed that some of the literature on the Shakers often treated these communes as being almost identical. Regional differences in the ways new communities responded to local conditions had not been well documented.

To examine patterns of specialization among the Shakers, Murray and Coşgel (1999b) used information from the manuscript schedules of the federal agricultural censuses from 1850 through 1880. For each Shaker community, they also recorded a random sample of five farms in the same township for comparison. For a quantitative analysis of regional differences, the authors estimated measures of specialization and crop choice for the sample of Shaker communities and the random sample of neighboring comparison farms, in each census year from 1850 to 1880.

The results showed systematic and consistent differences between eastern and western Shaker communities. The eastern Shakers were more specialized than the western Shakers. In particular, their output consisted of a higher percentage of perishables, a lower percentage of grains, and a higher percentage of livestock-related

items, relative to western Shaker production. Considering that these differences parallel the systematic differences between other farmers (neighbors, county, state) in the east and the west, they showed the regional diversity of Shaker farming strategies through their adaptation to local conditions. Western Shakers thus resembled more their neighbors in the west than other Shakers in the east.

14.7 Conclusion

As this brief survey illustrates, John Murray made outstanding contributions to the literatures on the economics of religion and American economic history by laying the foundations of an economic approach to religious communes and applying it to the history of the Shakers. He introduced the first economic model of communal membership in his Ph.D. dissertation. A topnotch economic historian, he analyzed the model's implications by using information from the enumeration schedules of the US censuses and economic data uncovered from various Shaker manuscripts, including letters, membership lists, legal and business documents, and diaries and journals.

In a series of publications that followed, Murray examined various important questions regarding the duration of membership and standards of living in Shaker communities and the organization and market integration of their businesses. I am fortunate and honored to be a part of his quest to understand the economic history of the Shakers.

Appendix: Coşgel on Murray

I got to know John in 1992, when he contacted me to ask for a copy of my paper on the bequest motive of the Amish, which I was scheduled to present at the upcoming annual meeting of the Economic History Association. When we met in person, we quickly realized we had a lot of research interests in common in the newly emerging field of the economics of religion. He was working on his Ph.D. dissertation on the Shakers, and learning about his approach to the Shakers was instrumental in shaping my own views on American religious communes and the relationship between religion and culture. Although we were originally asking different questions, our interests eventually converged as we met several times a year at the annual meetings of the Economic History Association, Social Science History Association, and Allied Social Science Association. Numerous lunch and dinner conversations during these meetings were memorable opportunities for learning, friendship, and discussing preliminary ideas that turned into several coauthored papers on the Shakers.

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