

An Economic Analysis of the United Order

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The physical scientist, working in his laboratory, conducts carefully planned experiments under strictly controlled conditions. The data thus generated can be measured with remarkable precision. The economist-scientist, on the other hand, neither conducts controlled experiments nor finds economic data readily available or precisely measured. The data problem is particularly acute in the study of economic history, where records are usually incomplete, inaccurate, or nonexistent. In light of these problems, the "discovery" of an experiment in alternative economic systems, conducted under (semi-) controlled conditions and accompanied by a body of high-quality data, is certainly rare, if not unique.

The Mormon United Order was such an experiment. Functioning briefly in the Great Basin during the last quarter of the nineteenth century, the experiment stands as one of mankind's most ambitious attempts to establish a utopian socioeconomic system.¹ This paper deals with some economic aspects of that system. Following a brief historical review, the theory of producer cooperatives is employed to generate some hypotheses about the functioning and eventual failure of the Order. Statements by Brigham Young and other Church leaders give us a second set of hypotheses, some following directly from stated goals of the United Order, and others dealing with factors contributing to the failure of the system. The two groups of hypotheses are compared and contrasted, and in the final section of the paper some preliminary results of an empirical study are presented.

A Look Back

An explication of the complex strand of events which led to the establishment of the United Order of Enoch is beyond the scope of this paper.² Two causal threads, however, are so prominently woven through the length of the strand that they deserve mention here. The first is the effort to achieve a "oneness," an ideal Christian community in which selfishness and greed would be replaced with brotherly love, and individualistic, competitive capitalism with order and unity. In February 1831, less than a year after the organization of The Church of Jesus Christ of Latter-day Saints, Joseph Smith announced the ideal community.³ The communitarian system operated briefly in 1831 at Thompson, Ohio, and again during 1831–1833 in Jackson County, Missouri. A modified form of the Law of Consecration was instituted at Far West, Missouri in 1838. These attempts to establish a

utopian community were thwarted by legal problems, lack of support from the Church membership, and mob violence, which culminated in the death of Joseph Smith in 1844 and the expulsion of the Mormons from the Midwest in 1846.

Within a decade of their arrival in the Great Basin, Church members were once again asked to live the Law of Consecration. The consecration movement of the 1850s, under the direction of Brigham Young, suffered a fate similar to that of the earlier movement. Problems with legality of land ownership, the threat of a federal army marching on Utah, and unenthusiastic public response to consecration combined to halt the experiment before it had fairly begun.⁴

In the 1860s economic cooperation received new emphasis with the establishment of cooperative mercantile and manufacturing enterprises. Not as radical an innovation as the stewardship system, the cooperatives were generally successful, sometimes spectacularly so. Model cooperatives were established at Brigham City in 1864, at Spanish Fork in 1867, and at Lehi in 1868. Zions Cooperative Mercantile Institution, incorporated in 1868, quickly emerged as the territory's most important wholesale store. More than 150 retail cooperatives and cooperative manufacturing enterprises were established during the late 1860s and early 1870s.⁵

The second main thread leading to the establishment of the United Order is the idea of group economic self-sufficiency. Although not explicitly stressed during the pre-Utah period, the appearance, if not the fact, of self-sufficiency was a natural outcome of the operation the Law of Consecration and Stewardship, and probably fueled fires of discrimination already sparked among non-Mormons by the apparent clannishness of the Mormon community. In turn, the general antagonism of their neighbors likely led Mormons to seek a greater degree of group self-sufficiency.

If economic self-sufficiency was desirable prior to 1847, it was essential in the years following the arrival of the Mormons in the Great Basin. With practically no access to outside markets, survival itself dictated a high degree of economic cooperation and direction. The completion of the transcontinental railroad in 1869, though ending the economic isolation which had earlier threatened their existence, was not viewed by Mormon leaders as an unmixed blessing. The large Numbers of "gentiles" flooding into the territory would bring with them all the attitudes and institutions of nineteenth-century American capitalism. The pursuit of profits, concentration of wealth, and competitive individualism which would inevitably follow the linkup threatened to seriously erode the bond of selflessness and brotherly love which held the Mormon social fabric together.

The establishment of the United Order, then, can be seen as an effort to maintain group self-sufficiency and to preserve group identity in the

face of increased pressures toward assimilation. At the same time, the Order was widely viewed by Church leaders and members as the means of realizing that "oneness" so long awaited.

The first United Order was organized 9 February 1874 at St. George, Utah. The last known Church-authorized branch of the United Order was established 9 January 1893 at Cave Valley, Chihuahua, Mexico. In the intervening years more than 200 other branches of the Order are known to have been organized in Mormon communities in Utah, Idaho, Wyoming, Nevada, and Arizona, a large majority of these being established in 1874 and 1875.⁶ Most of the United Orders had failed by 1877, the year of Brigham Young's death. Many either failed to operate at all or dissolved within a year. Some, like the Orders in Brigham City and Orderville, functioned successfully for a decade. A very few continued in some form into the 1890s. At least one, a joint enterprise of the Logan Second and Third Wards, survived into the twentieth century, selling out to private interests in 1909.⁷

In spite of a few notable successes, the usual united order experience was one of mounting frustration followed by dissolution and abandonment. The questions left unanswered in the wake of the United Order experiment are myriad. In the following sections we examine some of these questions in light of the theory of producer cooperatives and with the aid of empirical evidence.

The Theory

Beginning with Benjamin Ward's 1958 essay, interest in the theory of producer cooperatives has increased, particularly among economists interested in the comparison of economic systems. Although there have been several theoretical papers dealing with producer cooperatives, empirical testing of the issues has been practically nonexistent.⁸ Our purpose here is to pose some testable hypotheses which may be used to help answer the following four questions: (1) Were the distinctive operating characteristics predicted by economic theory evidenced in the workings of the various United Order organizations? (2) To what extent did the United Order succeed in its purposes as stated by Brigham Young and other Church leaders? (3) Are there factors peculiar to the economic organization of producer cooperatives which contributed to the eventual failure of the United Order? (4) Does empirical evidence corroborate factors suggested by contemporary observers as having contributed to the failure of the United Order?

The basic difference between the organization of a producer cooperative and of a capitalist firm is in the nature of the compensation of the worker. Whereas in a capitalist organization a worker receives a fixed wage rate, in the producer cooperative all workers, as members of the cooperative, share in net income. This leads to an important difference in labor

hiring. The capitalist, in an attempt to maximize profits, will hire workers up to the point where the value of the marginal product of labor equals the going wage. The producer cooperative, on the other hand, is interested in maximizing net income per worker, and will recruit members to the point where average net income is at a maximum (value of the marginal product of labor equals net value of the average product of labor). This basic difference in objectives leads to the following characteristics of a producer cooperative as compared to a capitalist firm:⁹

1. A capital-labor ratio which may be too high.
2. Inefficient allocation of labor among cooperatives.

Another possible problem of internally-financed producer cooperatives is a long-run tendency to underinvest, relative to the investment which would be undertaken by a capitalist firm. This is suggested as a reason why producer cooperatives might be unable to complete in the long run in a hostile (capitalist) environment. This tendency is based on the following argument: Suppose we have a producer cooperative which is internally financed. Since no individual member of the cooperative has claim over the capital owned by the cooperative, but only over a portion of the output from that capital, decisions relating to consumption vs. investment will be made based on the value of consumption now as compared to the present discounted value of the marginal product of the capital created if income is invested. The capitalist, on the other hand, compares the value of present consumption with the sum of the present discounted value of the marginal product of the capital and the present discounted value of the last-period capital itself. In particular, if the subjective discount rate is 10 percent, the capitalist will invest rather than consume if the marginal product of capital is greater than or equal to 10 percent. In a two-period model, the marginal product of capital necessary to induce a member of the cooperative to invest rather than consume is 110 percent. As the number of periods (time horizon) increases, the minimum marginal product of capital necessary to induce cooperative investment decreases, but for reasonable time horizons it will still be significantly larger (2 to 4 times) than the subjective rate of time preference (discount rate).¹⁰ Thus, we would expect:

3. Significant underinvestment in a producer cooperative relative to a capitalist firm.

A third set of characteristics of producer cooperatives has to do with incentives and labor-leisure choice. Here the particular type of producer cooperative becomes important. For purposes of analysis, let us classify cooperatives into two groups: collectives and communes. We define a collective as a cooperative where a worker's share of net income depends on

the number of hours of labor he contributes as a proportion of total labor contribution. A commune is a cooperative in which a member's share of income depends on anything other than the amount of work he contributes; for example, equal shares or shares according to need. Given this distinction, it can easily be shown that, other things being equal:¹¹

4. a. Work incentives and, therefore, hours worked will be greater in a collective than in a commune.
b. Incentives and hours worked will be greater in a capitalist organization than in a commune.
c. Incentives and hours worked will likely be greater in a collective than in a capitalist organization.
5. If the size of a collective increases, incentives and average hours worked increase. In a commune, if the size increases, incentives decrease.
6. Concern about the number of work hours contributed by others will likely arise in both collectives and communes. This may result in pressures to set maximum allowable hours in collectives and minimum hours in communes.

In order to use this theory in our study, we must identify individual branches of the United Order by type: collective, capitalist, commune. Although the actual organizational type varied considerably from community to community, most United Order fell roughly into one of three categories. First, the St. George type, in which members contributed their economic property to the Order and received differential wages and dividends depending upon the amount of labor and capital contributed. This type corresponds to our collective.¹² The second main category was the Brigham City plan, intended to strengthen and reinforce existing cooperative arrangements. Such communities did not require consecration of all one's property or labor, but operated much like a profit-sharing capitalist enterprise, issuing dividends on stock and hiring labor.¹³ Wards in the larger cities in the Territory used a modified Brigham City plan in establishing a needed cooperative or corporate enterprise. The final category consisted of those communities which organized on a communal basis, sometimes called the Gospel Plan. Members contributed all of their property to the Order, shared more or less equally in the common product, had no private property, and functioned, ate and worked as a well-regulated family. The Orderville United Order is the prime example of this communal type of organization.¹⁴

There are several testable hypotheses which come from the application of the theory to the United Order. We enumerate some of them as follows:

- I. There will be a tendency for the type 1 (St. George) and type 3 (Orderville) United Orders to limit membership in order to maintain high capital-labor and output-labor ratios.
- II. There will be an inefficient allocation of labor among types 1 and 3, reflected in different capital-labor ratios, wage rates, dividend rates, etc.
- III. Capital formation is likely to take place more rapidly in type 2 (Brigham City) United Orders than in either type 1 or type 3. This will be reflected in a larger percentage of net output retained as investment by the cooperative. To the extent that outside borrowing is available, the tendency will be less marked.
- IV. Incentives to work will be greatest in type 1 United Orders, least in type 3, with type 2 somewhere in between. These differences will be reflected in number of hours worked per member.
- V. The larger the type 1 United Order, the greater will be the average number of hours worked. As type 3 Orders increase in size, hours worked per person will decline.
- VI. Pressures to limit working hours may develop in type 1 Orders, but in type 3 Orders, the pressure will be to set minimum hour requirements.

Purpose of the Order

Stated purposes of the United Order provide another source of hypotheses. During the last decade of his life, Brigham Young found many opportunities to dwell upon the advantages awaiting those who would unite with their brethren in the Order.¹⁵ Substantial increases in productivity and income were expected through the mechanization and specialization made possible by pooling labor and capital.¹⁶ As incomes increased, men would find more time available to develop the cultural and spiritual sides of their lives. The disappearance of poverty would remove the burden of charity from society. Economic inequality would be eliminated, and in the Order men would truly be “one” in all things. Selling agents and purchasing agents would represent the United Order in outside markets, breaking the power of gentile merchants and eliminating the “ruinous competition” so prevalent in the capitalist system. Surplus income could be used to develop new products and to establish import-replacement industries, thus reversing the balance-of-trade deficit and stemming the flow of cash from the Territory.¹⁷ Economic self-sufficiency and monopoly power in trade would protect the United Order economy from the disruptive effects of capitalism’s cycle of boom and bust, with its accompanying price fluctuations. Internal prosperity would promote expansion, and new would probe westward and southward.¹⁸

Although the United Order obviously failed to achieve its full purpose, it is inconceivable that an experiment so ambitious left no impact on the society it was designed to change so radically. The stated objectives of the Order provide us with a means of determining the relative success of the experiment by measuring that impact. Formalizing the objectives into testable hypotheses, we obtain:

- VII. As United Orders are established, the volume of business done by “gentile” merchants will decrease.
- VIII. As United Orders develop, the rate of introduction of new products, crops, etc. into the Great Basin will increase.
- IX. As the United Order system grows, the rate of importation into the Territory, as well as the trade deficit, will decline.
- X. The rate of capital accumulation in the Territory will increase after the introduction of the United Order.
- XI. The establishment of the United Order will increase productivity and income, decrease unemployment, and eliminate poverty.
- XII. The United Order will promote economic equality. This will be evidenced by a decrease in measures of the inequality of wealth and income distribution across and within the various branches of the Order.
- XIII. The United Order will be used as a tool of colonization.
- XIV. The various measures of economic activity in the United Order economy will be little affected by fluctuation in the outside economy.

What Went Wrong?

The United Order experiment was short-lived. Brigham Young died 29 August 1877, barely three and one-half years after the beginning of the United Order movement. Yet, he had survived all but a handful of the 200 branches of the Order organized prior to his death. With the death of its most important sponsor, the movement itself was essentially finished, its promise left unfulfilled. One writer reflected:

There is something awesome in the spectacle of Brigham Young attempting to organize a communal commonwealth. The sheer scale of the undertaking imposed problems of a magnitude that makes it hardly comparable to small self-selected communes characteristic of nineteenth-century American communitarianism. There is, in addition, a marked poignancy in the vision of President Young, aging and in ill health, putting all his resources to the task of realizing in his lifetime the vision of Joseph Smith—and failing.¹⁹

Historians and contemporaries alike have suggested many possible explanations for the failure of the United Order. One factor which comes up repeatedly in the statements of contemporary observers is the failure of members of the Order to put aside feelings of selfishness.²⁰ Another oft-cited cause is the tendency of some members of the group to participate more enthusiastically in consumption than in production.²¹ That these problems should exist is not surprising in light of the interdependencies of individual income with other's work decisions which we observe in the theory of producer cooperatives. We would expect the problem of too many eaters and too few workers to be particularly acute in the communal type Order, since individual work incentives would be low, whereas selfishness and jealousies over hours worked might be expected to create significant problems in Orders of the St. George variety, where an increase in hours worked by one individual would reduce the income of everyone else.

Another problem facing the United Order, and one which elicited considerable comment at the time,²² was the reluctance on the part of relatively wealthy individuals to put their property in the Order. This reluctance was evident even in the St. George type Order, where individuals were to receive dividends on their contributed capital, and would be allowed to take at least a portion of their original capital out of the Order if they decided to withdraw.²³ Brigham Young himself was not immune to this reluctance. Although he had always stressed the importance of going wholeheartedly into the Order, and had indicated his desire to do so, in August 1874, speaking in Lehi, Young was forced to admit that,

I am laboring under a certain embarrassment and so are many others, with regard to deeding property, and that is to find men who know what to do with property when it is in their hands. . . . When this factory at Provo can go into the hands of men who know what to do with it, it will go; when my factory in Salt Lake County can go into the hands of men who know what to do with it, it will go.²⁴

When Brigham Young died three years later, such men still had not been found. Although this example is impressive evidence of the existence of the problem, its magnitude and pervasiveness must still be determined. This leads us to suggest another hypothesis:

- XV. Relatively wealthy individuals will not join the United Order, i.e., the average wealth and/or income of United Order members will be less than that of people who do not join the Order.

In addition to the above-mentioned difficulties there are a large number of additional factors which, though important, are not easily reduced to testable hypotheses. These include the movement toward legal incorporation which many felt destroyed the spirit of the United Order by replacing

goodwill and brotherly love with explicitly defined rights and contractual obligations. The distribution of voting power by shares of stock was felt by some to directly violate the striving for “oneness” stressed by Mormon leaders since the 1830s.²⁵

Continued government harassment of Mormon economic institutions and Church leaders throughout the United Order period must have gravely undermined the vitality of the system. Particularly damaging was the anti-polygamy campaign, which led to the arrest and imprisonment of many Mormon leaders who failed to escape to Canada or Mexico via the underground.²⁶

The death of Brigham Young in 1877 and his replacement by successors less enthusiastic about the Order, the tremendous pressures toward assimilation, the desire for statehood, and even the vagueness of the instructions as to organization and operation of the system all likely contributed to the demise of the system described by Brigham Young as being “called the Order of Enoch, but which is in reality the Order of Heaven.”²⁷

Although economic theory and hypothesis testing cannot answer all questions raised by the United Order experiment, it is possible, as we have shown, to construct a list of hypotheses which when tested can provide us with greater insights into the role of economic factors in the process of social change.

Since the main purpose of this paper is to apply economic theory to the United Order experience, and to suggest avenues for future empirical research, we do not, nor could we, attempt to provide test results for the fifteen hypotheses previously discussed. In the following section, however, we present preliminary empirical evidence for two of our hypotheses.

The Evidence

The hypotheses we have chosen to test are:

- XII. The United Order will promote economic equality. This will be evidenced by a decrease in measures of the inequality of wealth and income distribution across and within various branches of the Order.
- XV. Relatively wealthy individuals will not join the United Order, i.e., the average wealth and/or income of United Order members will be less than that of people who do not join the Order.

In addition, we will make reference to evidence which tends to support or deny the validity of other hypotheses.

Our sample consists of twelve communities, seven which had functioning United Orders, and five control cities which did not. The five communities without operational Orders were carefully chosen based on

similarity and proximity to one or more of our United Order communities. The following pairings were made:

United Order City	Control City
Brigham City	Logan
Cedar City	Beaver
Fairview	Manti
Kanab	Long Valley (Mt. Carmel, Glendale)
Monroe	Fillmore
Mt. Pleasant	Manti
Orderville	Long Valley

The Orderville United Order was communal, the Brigham City Order was capitalists, and Kanab had two Orders existing simultaneously—one communal and one collective.²⁸ The four remaining United Orders were collective.

The time period covered by the study is 1868–1880; particularly the years 1868, 1872, 1874, 1875, 1876 and 1880.²⁹ Our data consist of 12,650 individual income figures, an average of more than 2,100 per year, and include approximately 70 to 80 percent of all income earners in the communities covered. Within communities, the sample size ranges from 40 in Kanab, 1872, to 576 in Logan, 1880. In addition to the income data, we have been able to locate United Order account books for selected years for all of our United Order cities except Brigham City, for which capital stock accounts are available. Besides providing us with a record of debits and credits, these books, along with other United Order records, have enabled us to distinguish individuals who were members of the Order from those who were not.

The primary tool of analysis used in this study is the Gini concentration ratio, or Gini coefficient, a measure of distributional inequality which ranges from zero (signifying absolute equality) to one (absolute inequality).³⁰ The Gini ratios were estimated from the data by use of a technique recently developed by Bartell Jensen and James McDonald.³¹ Table 1 shows Gini ratios by community and by year. Three periods are particularly interesting. During the first, 1868–1872, the transcontinental railroad was completed, and several Utah lines were either completed or under construction.³² The second period, 1872–1875, encompasses the organization of the United Order (1874) and its first full year of operation (1875).³³ During the 1875–1880 period, we observe the failure of nearly all Orders which survived their first year.³⁴ Table 2 presents impressive evidence of the impact on income distribution of changes in economic institutions. During the 1868–1872 period, the estimated Gini ratios in eight of nine cases increased, the average change being 10 percent, with both groups of cities

Table 1
Gini Coefficient 1868–1880

(Sample Cities Paired with Control Cities)

City	1868	1872	1874	1875	1876	1880
Cedar City–UO	.472	.572	.553	.581	.611	.616
Beaver–control	.504	.582	.591	.633	.638	.604
Fairview–UO	.477	.452	.478	.547	.503	.452
Manti–control	.529	.566	.516	.534	.540	.574
Kanab–UO	—	.518	.477	.530	.531	.492
Long Valley–control	—	.487	.582	.525	.598	.576
Monroe–UO	—	.485	.572	.674	.519	.509
Fillmore–control	.547	.639	.635	.620	.503	.548
Mt. Pleasant–UO	.415	.485	.509	.524	.502	.537
Manti–control	.529	.566	.516	.534	.540	.574
Orderville–UO	—	—	—	—	—	.290
Long Valley–control	—	—	—	—	—	.576
Brigham City–UO	.499	.511	.504	.488	.520	.555
Logan–control	.465	.495	.501	.491	.479	.514

SOURCE: U.O. Accounts and General Economic Records (MSS.), Church Archives, LDS Church.

Table 2
Percent Change in Gini Coefficient

(Sample cities paired with control cities)

City	1868–72	1872–75	1875–80	1872–80
Cedar City–UO	21	1	6	8
Beaver–control	15	9	–4	4
Fairview–UO	–5	21	–17	*
Manti–control	7	–6	8	2
Mt. Pleasant–UO	17	8	3	11
Manti–control	7	–6	8	2
Monroe–UO	—	39	–25	5
Fillmore–control	17	–3	–12	–14
Kanab–UO	—	2	–7	–5
Long Valley–control	—	8	10	18
Brigham City–UO	2	–5	14	9
Logan–control	9	–1	5	4
UO–Average	9	11	–4	5
Control–Average	11	*	2	3

*Indicated less than 0.5% change.

SOURCE: U.O. Accounts and General Economic Records (MSS.), Church Archives, LDS Church.

showing a similar pattern. It is tempting to attribute the increased inequality to the completion of the transcontinental railroad, but such conclusions must remain tentative until further studies are made.³⁵

The changes which took place during the second period are of particular interest. Here we find a dramatic shift toward inequality in the United Order cities with the average increase in the Gini ratio being 11 percent. If we eliminate Brigham City, which was not a producer cooperative by our definition, the average becomes 14 percent. All but two of the control cities, on the other hand, show a decrease in the Gini ratio—a move toward equality.³⁶

The third period, 1875–1880, is not as easily interpreted. We have all possible combinations of increases and decreases in our six pairs. The general movement seems to be toward greater equality in United Order communities than in the control group. In only two of the pairs does the United Order city become less equal relative to its control city. The average gain in equality is 4 percent (8 percent without Brigham City) in the Order group, while the control communities moved slightly toward less equality.

Finally, for the entire 1872–1880 period, we see that only Kanab, among United Order cities, achieves a significant decrease in inequality, either absolutely or relative to the control city.

Now that we have seen the results for the individual communities, let us turn to the examination of income distribution across communities. Table 3 gives Gini ratios across cities by group and for the entire sample. In Table 4 we are given the percentage change in Gini ratios for the three periods in question. The results of this analysis correspond closely to those we obtained for individual cities. Both of our groups show an increase in inequality for the first period. In the second period, the United Order Gini again increases, this time by 16 percent, while the control group Gini decreases slightly.³⁷ During the third period, income in both groups becomes more equally distributed, and for the entire 1872–1880 period, inequality increases by 2 percent in the United Order group, and decreases by 5 percent in the control group.

Based on the preliminary data cited above, we tentatively reject hypotheses XII. It appears that the United Order did not promote equality in the distribution of income across communities, and did not increase equality within communities having St. George type orders. On the contrary, the introduction of the United Order seems to have substantially reduced the degree of equality in most cases. The exceptions to the general case are clearly the communal type order. Unfortunately, we were unable to obtain Orderville income data for years prior to 1880, but a glance at Table 1 should be enough to convince any skeptic that the Orderville United Order did promote economic equality. The Gini ratio of .290 is just

Table 3
Gini Coefficient by Years

(Sample Cities vs. Control Cities)

City	UO Cities	Control Cities	Total
1868	.485	.520	.508
1872	.518	.590	.565
1874	.524	.587	.565
1875	.600	.587	.582
1876	.538	.544	.542
1880	.530	.558	.546

SOURCE: U.O. Accounts and General Economic records (MSS.), Church Archives, LDS Church.

Table 4
Percent Change in Gini Coefficient

(Sample Cities vs. Control Cities)

Year	UO Cities	Control Cities	Total
1868–72	7	13	11
1872–75	16	–2	3
1875–80	–12	–3	–6
1872–80	2	–5	–3

SOURCE: U.O. Accounts and General Economic Records (MSS.), Church Archives, LDS Church.

half that of Long Valley, the control community. Figure 1 shows actual 1880 Lorenz curves for Orderville and for Long Valley. We would expect to observe a more equal distribution in a commune that in a collective, the manner in which income is distributed being the major difference between the two, but explaining the long run success of Orderville or any commune is difficult in light of the theory of producer cooperatives. Economic considerations alone cannot provide the answer, at least not without some changes in basis assumptions, particularly the traditional assumption of self-interest.³⁸ The Brigham City United Order was, of course, simply a continuation of the capitalist-type, profit-sharing mercantile and manufacturing enterprise already in existence in the city. As such it would be expected to promote economic equality to the degree that the ownership of capital stock was equally distributed.

FIGURE 1
Comparison of Lorenz Curves for Orderville and Long Valley,
1880

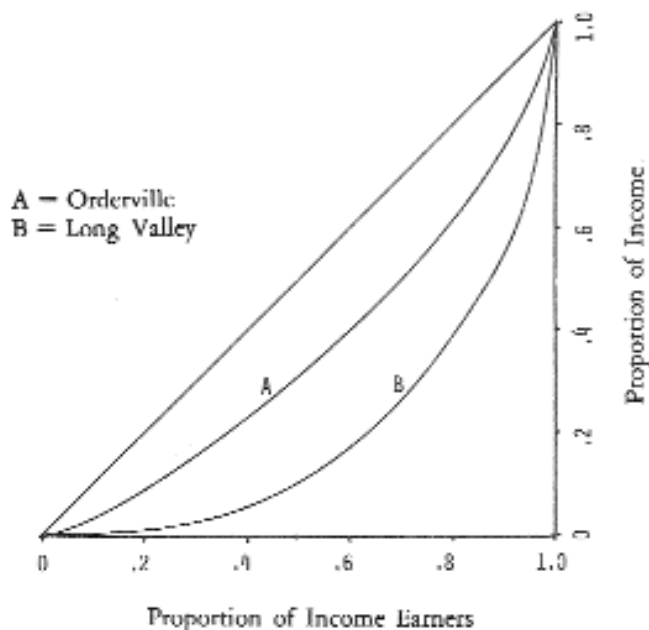
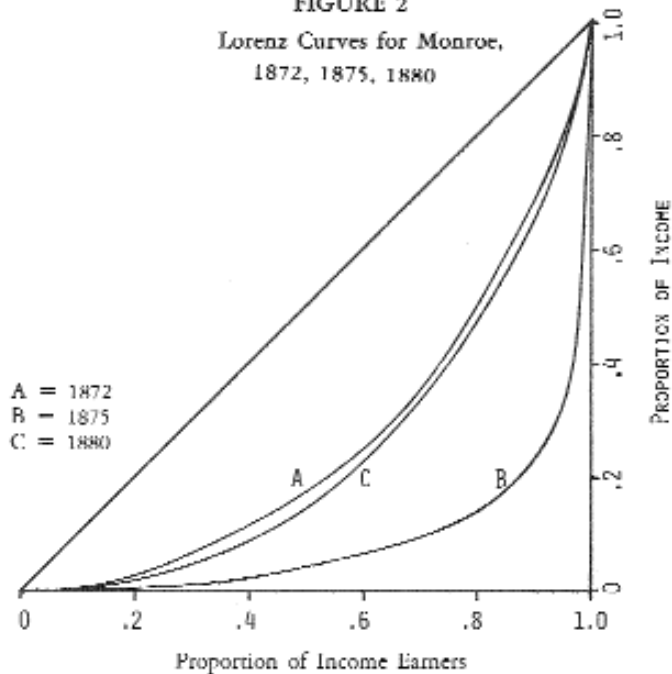


FIGURE 2
Lorenz Curves for Monroe,
1872, 1875, 1880



SOURCE: U.S. Accounts and General Economic Records (MES.), Church Archives, LDS Church.

The reduction in economic equality across United Order cities is not unexpected; in fact, we might have predicted it from hypothesis II. A result which is rather perplexing, however, is the reduction in equality observed within communities as collective type United Orders are established. A comparison of actual Lorenz curves for Monroe in 1872, 1875, and 1880 can be seen in Figure 2. Notice the dramatic shift toward inequality from 1872 to 1875, and the return to relative equality by 1880. A complete elucidation of this result will not likely be possible without more extensive examination of the data, but we can speculate about possible contributing factors. First, it is of interest to note that in the United Order accounts, an individual's credits are his "money" income, the measure we have used in estimating Gini ratios. The "real" income of a person, however, is perhaps best indicated by his debits, the measure of actual consumption. A redistribution of income takes place when credits and debits are not equal, particularly in those Orders which canceled debits and credits at the end of each year.³⁹ Table 5 compares means and Gini ratios for debits and credits in various United Orders. Only in Monroe were debits less equally distributed than credits.⁴⁰ This may indicate that the degree of inequality in United Order cities is exaggerated through the use of credits as part of income rather than debits. A comparison of Tables 1 and 5, however, indicates that even United Order debits are less equally distributed than total community income in all cities except Fairview.

The fact that most St. George type Orders paid fairly competitive dividends on capital contributed but paid low wages for contributed labor may help explain the inequality. Since wealthy individuals tended to receive a higher percentage of their income from capital than did poorer people, the increase in the return to capital relative to that of labor would likely increase inequality. A related source of inequality in such Orders is the fact that different people contributed different proportions of their labor and capital. If the return to capital in the Order is not as attractive as that outside the Order, not much capital is likely to be contributed. Again, individuals earning most of their income from labor may be hurt, this time doubly so, since capital formation and productivity will suffer. None of these explanations seems completely satisfactory, yet all would bear looking into.

A result of this study which seems striking is the high degree of income inequality suggested by the overall magnitude of the Gini ratios. For individual communities (excluding Orderville) the ratios range from .674 (Monroe, 1875) to .415 (Mt. Pleasant, 1868). The average ratio is .535. For the entire sample, the Gini ranges from .508 in 1868 to .582 in 1875. In a recent study of the distribution of family income by state for the 1949–1969 period, the Gini ratios range from .536 (Mississippi, 1949) to .323 (New Hampshire, 1969).⁴¹

TABLE 5
Means and Gini Coefficients for Debits and Credits in UO Cities

<u>City</u>	<u>Year</u>	<u>Debits</u>		<u>Credits</u>	
		<u>Mean</u>	<u>Gini</u>	<u>Mean</u>	<u>Gini</u>
Cedar City	1874	116	.574	54	.608
Fairview	1875	154	.503	198	.548
Kanab	1874	139	.570	198	.609
Monroe	1876	187	.596	276	.562
Mt. Pleasant	1875	231	.545	297	.586
Monroe	1877	272	.590	237	.585

SOURCE: U.O. Accounts and General Economic Records (MSS.), Church Archives, LDS Church.

TABLE 6
Mean Income of UO Members and Non-Members Prior to the Establishment of the Order (1872)

<u>City</u>	<u>Mean Income</u>	<u>Mean Income</u>
	<u>UO Member</u>	<u>Non-member</u>
Fairview	614.23	416.70
Mt. Pleasant	907.33	496.08
Cedar City	672.41	422.80
Orderville	319.62	217.68
Monroe	277.30	213.18

SOURCE: U.O. Accounts and General Economic Records (MSS.), Church Archives, LDS Church.

TABLE 7
Mean Income of Members and Non-Members of The UO in Sample Cities

<u>City</u>	<u>Year</u>	<u>Mean Income</u>	<u>Mean Income</u>	<u>Total</u>
		<u>UO Members</u>	<u>Non-Members</u>	
Cedar City	1874	522	271	395
Fairview	1875	174	162	171
Kanab*	1874	289	219	271
Monroe	1876	113	284	147
Mt. Pleasant	1875	252	191	223
Brigham City	1875	419	311	357
Monroe	1877	127	144	134

*In Kanab, "UO members" refers to those in the communal order led by John R. Young; "non-members" participated in a collective type Order under Bishop Levi Stewart. Records show that only two families did not participate in either Order. (Kanab U.O. records and Dean May, Senior Historical Associate, Church Historical Dept., LDS Church.)

SOURCE: U.O. Accounts and General Economic Records (MSS.), Church Archives, LDS Church.

The apparently greater degree of inequality evidenced in our results may be overstated relative to the interstate study because that study deals with family income, while ours includes each income earner separately.

Hypothesis XV states that a contributing cause in the failure of the United Order was the reluctance of relatively wealthy individuals to join the Order. Table 6 compares mean income in 1872 of those individuals who later became members of the United Order to the mean income in 1872 of those who apparently did not join.⁴² Table 7 contains a comparison of member and non-member income by United Order for 1874–1876. With the exception of Monroe, the average income of individuals who joined the United Order was substantially greater than that of individuals who did not join. Based on this data, we would reject the hypothesis. The problem is not as simple as it may appear, however. It was possible, in most instances, for an individual to join the United Order without contributing all, or any, of his property, and those with property to manage outside the Order likely found it difficult to contribute very much labor to the Order. The observed fact that relatively wealthy people did join the order loses much of its meaning in the absence of evidence concerning the degree of involvement of those people and their property in the Order.⁴³ The collection and analysis of such evidence would seem to be a fruitful avenue for future research.

APPENDIX

Listing by state of all communities known to have been organized under the United Order***Arizona**

Beaver Dams (Littlefield Ward),
Mojave Co.
Brigham City (Ballinger), Navajo Co.
Graham, Graham Co.
Hayden's Ferry (Hayden), Gila Co.
Joseph City (Allen's Camp, St.
Joseph), Navajo Co.
Mesa, Maricopa Co.
Mill Point
Mt. Trumbull, Mojave Co.
Obed, Navajo Co.
Salt Creek
Simonsville
Snowflake, Navajo Co.
Sunset, Navajo Co.
Taylor, Navajo Co.
Woodruff, Navajo Co.

Idaho

Bear Lake Stake
Bennington, Bear Lake Co.
Bloomington, Bear Lake Co.
Fish Haven, Bear Lake Co.
Franklin, Franklin Co.
Liberty, Bear Lake Co.
Malad, Oneida Co.
Montpelier, Bear Lake Co.
Ovid, Bear Lake Co.
Paris, Bear Lake Co.
Samaria, Oneida Co.
St. Charles, Bear Lake Co.

Mexico

Cave Valley, Chihuahua

Nevada

Bunkerville, Clark Co.
Overton, Clark Co.
Panaca, Lincoln Co.
St. Joseph, Clark Co.
St. Thomas, Clark Co.

Utah

Adamsville, Beaver Co.
Alpine, Utah Co.
American Fork, Utah Co.
Annabella, Sevier Co.
Axtell, Sanpete Co.
Bear Lake Stake
Bear River City, Box Elder Co.
Beaver, Beaver Co.
Beaver Stake
Bellevue (Bellevue), Washington Co.
Big Cottonwood, Salt Lake Co.
Bountiful, David Co.
Box Elder County
Brigham City, Box Elder Co.
Brighton, Salt Lake Co.
Cache Valley Central
Cedar City, Iron Co.
Cedar Fort (Cedar Valley), Utah Co.
Centerfield, Sanpete Co.
Centerville, David Co.
Circleville, Piute Co.
Clarkston, Cache Co.
Coalville (Cluff Ward), Summit Co.
Cooper Bottom, Washington Co.
David County Eden, Weber Co.
Elsinore, Sevier Co.
Ephraim, Sanpete Co.
Fairfield, Utah Co.

*From lists compiled by L. Dwight Israelsen, Leonard J. Arrington, and Feramorz Y. Fox.

Fairview, Sanpete Co.
Farmers and Horticulturists, Salt Lake Co.
Farmington, David Co.
Fayette, Sanpete Co.
Fillmore, Millard Co.
Fountain Green, Sanpete Co.
Glendale, Kane Co.
Glenwood, Sevier Co.
Goshen, Utah Co.
Greenville, Beaver Co.
Gunnison, Sanpete Co.
Harmony (New Harmony), Washington Co.
Harrisburg, Washington Co.
Heber, Wasatch Co.
Heberville Bottoms, Washington Co.
Hebron, Washington Co.
Henneferville, Summit Co.
Holden, Millard Co.
Huntsville, Weber Co.
Hyrum, Cache Co.
Hyde Park, Cache Co.
Iron County
Jericho, Juab Co.
Johnson, Kane Co.
Joseph, Sevier Co.
Juab Stake
Kamas, Summit Co.
Kanab, Kane Co.
Kanarra (Kanarraville), Iron Co.
Kanosh, Millard Co.
Kaysville, David Co.
Kingston, Piute Co.
Laketown, Rich Co.
Leeds, Washington Co.
Lehi, Utah Co.
Levan, Juab Co.
Liberty, Weber Co.
Logan, Cache Co.
Logan 1st, Cache Co.
Logan 2nd, Cache Co.
Logan 3rd, Cache Co.
Lynne, Weber Co.
Mammoth, Juab Co.
Manti, Sanpete Co.
Marriott's Settlement, Weber Co.
Mayfield, Sanpete Co.
Mantua, Box Elder Co.
Meadow, Millard Co.
Mendon, Cache Co.
Millard, Millard Co.
Millard Stake
Mill Creek, Salt Lake Co.
Millville, Cache Co.
Minersville, Beaver Co.
Monroe, Sevier Co.
Morgan, Morgan Co.
Moroni, Sanpete Co.
Morristown, Washington Co.
Mt. Carmel, Kane Co.
Mt. Pleasant, Sanpete Co.
Nephi, Juab Co.
North Canyon, David Co.
Oak Creek, Millard Co.
Ogden Central, Weber Co.
Ogden 1st District, Weber Co.
Ogden 2nd District, Weber Co.
Ogden 3rd District, Weber Co.
Orderville, Kane Co.
Panguitch, Garfield Co.
Paradise, Cache Co.
Paragoonah (Paragonah), Iron Co.
Pahreah (Paria), Kane Co.
Paris, Kane Co.
Parowan, Iron Co. Payson, Utah Co.
Peoa, Summit Co.
Pine Valley, Washington Co.
Pinto, Washington Co.
Pintura, Washington Co.
Plain City, Weber Co.
Pleasant Grove, Utah Co.
Portage, Box Elder Co.
Porterville, Morgan Co.
Prattville, Sevier Co.
Price City, Washington Co.
Provo, Utah Co.
Provo, Central, Utah Co.

Randolph, Rich Co.
 Richfield, Sevier Co.
 Richmond, Cache Co.
 Rockport, Summit Co.
 Rockville, Washington Co.
 Salem, Utah Co.
 Salina, Sevier Co.
 Salt Lake Central, Salt Lake Co.
 Salt Lake City #1, Salt Lake Co.
 Salt Lake City 1st through 17th, 19th,
 20th, Salt Lake Co.
 Sanpete County
 Santa Clara, Washington Co.
 Santaquin, Utah Co.
 Sevier Stake
 Scipio, Millard Co.
 Shunesburg, Washington Co.
 Slaterville, Weber Co.
 Smithfield, Cache Co.
 South Cottonwood, Salt Lake Co.
 Southern Utah Mission
 Spanish Fork, Utah Co.
 Spring City, Sanpete Co.
 Springdale, Washington Co.
 Springlake, Utah Co.
 Springville, Utah Co.
 St. George, Washington Co.
 St. George 1st, Washington Co.
 St. George Stake
 Summit, Iron Co.
 Summit Stake
 Tanners, Salt Lake Co.
 Tailors, Salt Lake Co.
 Toquerville, Washington Co.
 Tooele, Tooele Co.
 Utah County Central
 Virgin City, Washington Co.
 Virgin Field, Washington Co.
 Vermillion (Sigurd), Sevier Co.
 Wanship, Summit Co.
 Washington, Washington Co.
 Wellsville, Cache Co.
 West Jordan, Salt Lake Co.
 West Weber, Weber Co.
 Willard, Box Elder Co.
 Willow Creek (Draper), Salt Lake
 Co.
 Woodruff, Rich Co.

Wyoming

Almy, Utah Co.

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1. The 1874 "United Order," also called the "United Order of Enoch," of "Second United Order," should not be confused with the communitarian system which functioned briefly in Ohio in 1831, in Jackson County, Missouri, 1831–1833, and in modified form at Far West, Missouri in 1838. This earlier experiment is referred to as the "Law of Consecration and Stewardship," the "Order of Enoch," of "First United Order."

2. The most comprehensive and thorough study of the history of the cooperative movement in the Mormon Church is Leonard J. Arrington, Feramorz Y. Fox, and Dean L. May, *Building the City of God: Community and Cooperation among the Mormons* (Salt Lake City: Deseret Book, 1976.) Another excellent and thorough study is Leonard J. Arrington, *Great Basin Kingdom: An Economic History of the Latter-day Saints, 1830–1900* (Cambridge, Mass.: Harvard University Press, 1958).

3. See Arrington, Fox, and May, *Building of the City of God*, Chapter 2; Arrington, *Great Basin Kingdom*, Chapter 1; Leonard J. Arrington, "Early Morning Communitarianism: The Law of Communitarianism: The Law of Consecration and Stewardship," *Western Humanities Review* 7 (April 1953): 341–369; and Hamilton Gardner, "Communism among the Mormons," *Quarterly Journal of Economics* 37 (November 1922): 134–74.

4. See Arrington, Fox and May, *Building the City of God*, Chapter 4; and Arrington, *Great Basin Kingdom*, Chapter 5.

5. For a general discussion of the organization of cooperative and manufacturing enterprises, see Arrington, Fox and May, *Building the City of God*, Chapter 5; Arrington, *Great Basin Kingdom*, Chapter 10; and Hamilton Gardner, "Cooperation Among the Mormons," *Quarterly Journal of Economics* 31 (May 1917): 461–99. A list of cooperative mercantile establishments can be found in Arrington, Fox, and May, *Building the City of God*, Appendix 4.

6. See Appendix. For a discussion of the general United Order movement, see Arrington, Fox, and May, *Building the City of God*, Chapters 6–14; Arrington, *Great Basin Kingdom*, Chapter 11; Edward J. Allen, *The Second United Order Among the Mormons* (New York: AMS Press, 1967); and Gardner, "Communism Among the Mormons." Studies of particular United Orders can be found in Joseph Carl Felix, *Development of Cooperative Enterprises in Cache Valley, 1865–1900* (Provo, Utah: Brigham Young University Press, 1956); Arrington, "Cooperative Community in the North: Brigham City Utah," *Utah Historical Quarterly* 33 (Summer 1965): 199–216; Leonard J. Arrington in Joel E. Ricks and Everett L. Cooley, eds. *The History of a Valley: Cache Valley, Utah-Idaho* (Logan, Utah: Cache Valley Centennial Commission, 1956), Chapter 8; Leonard J. Arrington, *Orderville, Utah: A Pioneer Mormon Experiment in Economic Organization* (Logan, Utah: USAAC Monograph Series, Vol. 2, No. 2, March 1954); Feramorz Y. Fox, "Experiment in Utopia: The United Order Of Richfield, 1874–1877," ed. Leonard J. Arrington, *Utah Historical Quarterly* 32 (Fall 1964): 355–80; Andrew Jenson, "Orderville," *Utah Genealogical and Historical Magazine* 7 (July 1916): 128–41; Charles S. Peterson, *Take Up Your Mission: Mormon Colonizing Along the Little Colorado River, 1870–1900* (Provo, Utah: Brigham Young University Press, 1973), Chapter 5.

7. Arrington, in Ricks and Cooley, *The History of a Valley*, pp. 198–99. The longest-lived United Orders were generally of the "Brigham City" type. These were established

in northern Utah and southern Idaho, and, in modified form, in Salt Lake City, Ogden, Provo, and Logan. Communal type orders survived in Arizona and Nevada into the 1880s (see Arrington, Fox, and May, *Building the City of God*, Chapter 10).

8. Papers on the theory of producer cooperatives include Benjamin Ward, "The Firm in Illyria: Market Syndicalism," *American Economic Review* 48 (September 1958): 566–89; Peter G. Helmlinger, "Cooperative Enterprise as a Structural Dimension of Farm Markets," *Journal of Farm Economics* 46 (August 1964): 603–17; Evsey D. Domar, "The Soviet Collective Farm as a Producer Cooperative," *American Economic Review* 56 (September 1966): 734–57; Amartya K. Sen, "Labor Allocation in a Cooperative Enterprise," *Review of Economic Studies* 33 (October 1966): 361–71; James G. Youde and Peter G. Helmlinger, "Marketing Cooperatives in the U.S.: Membership Policies, Market Power, and Antitrust Policy," *Journal of Farm Economics* 46 (August 1966): 23–36; Michael E. Bradley, "Incentives and Labor Supply in Co-operative Enterprises," *Canadian Journal of Economics* 4 (August 1971): 342–52; Norman Cameron, "Incentives and Labor Supply on Soviet Collective Farms," *Canadian Journal of Economics* 6 (February 1973): 16–22; L. Dwight Israelsen, "Collectives, Communes and Incentives," working paper, Brigham Young University, Department of Economics, 1975; and L. Dwight Israelsen, "Economics of the United Order," working paper, Brigham Young University, Department of Economics, 1975.

9. See Israelsen, "Economics of the United Order," Mathematical Appendix 1.

10. *Ibid.*, Mathematical Appendix 2.

11. See Israelsen, "Collectives, Communes and Incentives."

12. The great majority of United Orders were of the St. George variety. See Arrington, Fox, and May, *Building the City of God*, Chapters 7 and 8. Members of the St. George type United Order were not required to place all their property in the Order. Dividends were to be paid at five-year intervals in proportion to the capital invested. Individuals were to be allowed to withdraw from the Order, but would forfeit one-half of their accumulated capital and dividend. (Articles 12 and 13 of the Articles of Agreement of the United Order of the City of St. George. See Arrington, Fox, and May, *Building the City of God*, Appendix 5.) The fact that dividends are received should cause no qualitative change in the theory of producer cooperatives. See Israelsen, "Economics of the United Order," Footnote 12.

13. Such United Orders were essentially joint-stack companies, and were organized in the northern part of the Great Basin, where cooperative efforts had been necessary from the beginning. Besides Brigham City, Hyrum, Utah and Paris, Idaho operated successful Orders of this types. See Arrington, Fox, and May, *Building the City of God*, Chapters 6 and 10; Arrington, "Cooperative Community in the North"; Arrington, *Great Basin Kingdom*, Chapter 11; Arrington, in Ricks and Cooley, *The History of a Valley*, Chapter 8; and Felix, *Cooperative Enterprises in Cache Valley*.

14. The communal types United Orders, although conforming most closely to the system Brigham Young seemed to favor prior to 1874 (Arrington, Fox, and May, *Building the City of God*, pp. 139, 140), were few in number: Orderville, Price City, Springdale, and Kingston, Utah; Bunkerville, Nevada; and Joseph City, Sunset, and Brigham City, Arizona were the most successful. Kanab had two United Orders, one of which (John R. Young, president) was communal. Communal Orders were tried briefly at other places, including Monroe, Richfield, and Joseph, Utah; Cave Valley, Chihuahua, Mexico; and Obed, Woodruff, Snowflake, and Taylor, Arizona. Arrington, Fox, and May, *Building the City of God*, Chapters 9, 11, 12, 13; Peterson, *Take Up Your Mission*, Chapter 5; Monroe United Order Minutes, Church Archives, Historical Department of the Church of Jesus Christ of Latter-day Saints, Salt Lake City, Utah (cited hereafter as Church Archives).

15. See Arrington, Fox, and May, *Building the City of God*, pp. 139, 140, 143, 157, 158; *Journal History of the Church*, 9 May 1874, pp. 1–6, Church Archives. Brigham Young was not the only spokesman for the United Order. George Q. Cannon, Erastus Snow, Wilford Woodruff, George A. Smith, Orson Pratt, John Taylor, Daniel H. Wells, and Joseph Young were among the many Mormon leaders who publicly extolled the advantages of the Order. (See *Journal History of the Church*, 9 May 1874 for a report of General conference, which was reconvened in order to present the United Order system to the Church membership. See also Arrington, Fox, and May, *Building the City of God*, Chapter 7; and *Conference Reports* for 1872 and 1873.) The goals of the United Order are summarized in the preamble to the Articles of Agreement of the United Order of the City of St. George.

16. For example, in Gunnison, a committee set up to investigate the resources necessary to establish a workable Order estimated that under the United Order system only two-fifths as much land and equipment would be needed to produce the amount produced under the “old system” (Gunnison Ward United Order Records, Church Archives). In General Conference in May 1874, Brigham Young said: “I can tell you now what it will do for you. It will not make any person any worse off in temporal matters, but it will place thousands and hundreds of thousands in a condition in which they will be as comfortable and happy as they can desire.” Erastus Snow pointed out that the cooperative institutions already established had done much by a combination of capital. The new order, however, involved an “amalgamation of capital and labor,” and would “promote the greatest good to the great number” (*Journal History of the Church*, 9 May 1874, pp. 1–6).

Article 13 of the Articles of Agreement of the United Order of the City of St. George, in justifying a penalty of one-half of the accumulated dividends and capital for withdrawal from the Order, stated that the increased efficiency in the Order would make “the half greater than the whole” would have been under the old system. (Arrington, Fox, and May, *Building the City of God*, Appendix 5. See also Allen, *The Second United Order*, pp. 43, 53.)

17. The similarities to modern techniques of economic development are striking. Statements by Mormon leaders include; George A. Smith—“Since the earliest settlement in the Territory the leading men of the Church attempted to impress the minds of the people with the necessity of being, as much as possible, self-sufficient.” Erastus Snow—“We shall also be enabled to start new enterprises and if they do not pay at first, they are bound to pay in the end, if they are necessary adjuncts to the prosperity of society.” George A. Smith—“You go through Utah County, today, and say to a farmer, ‘Have you got any sorghum to sell?’ ‘No, haven’t raised any for two or three years; sugar got so cheap, we could not sell it.’ ‘I suppose you have plenty of sugar?’ ‘No, we are out of sugar, we haven’t any money to buy it with.’” *Journal History of the Church*, 9 May 1874, pp. 1–6, Church Archives. Wilford Woodruff—“It is surprising that any money is left in the Territory at all, under the ruinous importing and non-exporting policy that has been pursued heretofore.” Erastus Snow on the advantages of having United Order business handled by purchasing and selling agents—“. . . and what we have for sale we will sell in the best markets, and so enjoy the benefits of our labor, and not by interior competition and underbidding and underselling each other ‘scatter our ways to strangers’ as we have done in the past. By this combined effort we shall be able to obtain the full market value of our products” (*Journal History of the Church*, 29 July 1874, Church Archives). See also Instructions for Members of the United Order, reproduced in Appendix 6, Arrington, Fox, and May, *Building the City of God*, for suggestions on

growing new products such as tobacco and grapes for raisins, wine, and brandy; and making cloth, shoes, etc.; and *Journal History of the Church*, 6 July 1874, p. 1.

18. During the winter of 1872–73, Brigham Young and Thomas Kane conceived a plan to establish a second greater gathering place for Mormons in Mexico’s Sonora Valley. The new center was to be connected with Utah by a string of colonies similar to the “Mormon Corridor.” The colonization of Arizona in 1876 was apparently the first stage of the plan. (Peterson, *Take Up Your Mission*, Chapter 1; Arrington, Fox, and May, *Building the City of God*, p. 295.)

19. Arrington, Fox, and May, *Building the City of God*, pp. 11–12.

20. On the failure of the Morgan City United Order: “If I understand the disposition of the people it is a lack of confidence in one another” (*Journal History of the Church*, 4 May 1876). The American Fork United Order failed due to “selfishness and laziness” (George F. Shelly, *Early History of American Fork*, n.p., n.d.). Joseph A. Young, speaking to members of the Richfield United Order, said that “The feeling ‘Mine’ is the greatest feeling we have to combat,” and that they should not allow selfishness “to have sway or room in our hearts, but if it is deemed necessary to agree to disagree and every one to labor himself, that we should manifest the same good spirit we enjoyed when we embraced and entered upon the principles of the U. O.” (Arrington, Fox, and May, *Building the City of God*, p. 201–202). John Taylor, reviewing the history of the cooperative movement, said that from the time of Joseph Smith, it had been thwarted by the “great covetousness, selfishness, and wickedness of the people” (Arrington, Fox, and May, *Building the City of God*, p. 316. See also pp. 281–282).

21. In Richfield, it was stated that the Order was carrying 100 nonproducers. One man was brought before the board for earning only ten dollars credit in six weeks. Arrington, Fox, and May, *Building the City of God*, pp. 189, 194, 195. From an Orderville United Order document: “Whereas _____ has seen fit to sever his connection with the United Order, and upon settlement it is found that he is in debt to the Order in the sum of \$699.93, and whereas for several months past has been unfaithful in his labors, loitering and trifling his time away and otherwise breaking his covenants he made when he united with us. Therefore be it resolved that it is right and just in every respect, to hold him to the full and complete payment of the above indebtedness. Nevertheless, as he has a large family to support and his best days are gone, be it further resolved as an act of charity to his little children, that the above indebtedness be canceled by the entry of this resolution, on the Ledger.” Arrington, Fox, and May, *Building the City of God*, p. 282.

22. The anti-Mormon *Salt Lake Daily Tribune* editorialized on 7 March 1874: “If the Profit don’t make the rich men fork over as well as the poor, we shall think him an unjust, discriminating Profit, and shall tell the world that he is afraid of the strong rich men and is an oppressor of the weak and the poor. Brother Brigham, sail in, and show a fair hand in this Euchre Business. Don’t slight Brother Jennings, Hopper, or any of the gilt-edged. One big pot, Brother Brigham, and no favoritisms” (as cited in Arrington, Fox, and May, *Building the City of God*, p. 149).

23. The hesitancy to put property in the Order was by no means limited to wealthy individuals. A non-Mormon living in Beaver in 1874 wrote: “Mormons say here that he (Brigham Young) wishes to get hold of their property, then he will compel them to do anything he orders or excommunicate them. A number of the faithful are distressed over this matter. They dislike to give up their fellowship, and they dislike to give up their property” (Arrington, Fox, and May, *Building the City of God*, p. 145). From American Fork came the following: One man “being absent last meeting he was called on to make his statement in relation to the Order and said he had nothing to say against

the Order, he did not understand it neither did he understand that a man's money was not wanted. He understood the man his money and all he was wanted. But when you come to talk of business, if a man is a business man and goes into any business, and puts in 1,000 and only gives back 500 we would say it was a swindle.

"And in reference to hauling grain into one big sack and dividing the grain, a man must look after his straw and chaff or he will not raise grain long. I want to see how these things will work a little. But if my standing is at stake, you take my horses, cattle and all I have."

The Bishop responded: "We can take whatever shares in this order we like, nothing shall be wasted, instead of diminishing and bringing to poverty, it is the very road to wealth . . . As to the idea of a man's fellowship being at stake, no such thing" (American Fork Ward Teachers Minutes, 8 June 1874, p. 50, MS, Church Archives.) See also *Journal History of the Church*, 15 August 1874, p. 3.

24. Sermon of 9 August 1874, *Journal of Discourses*, 26 vols. (London: Latter-day Saint's Book Depot, 1855–86), 18:248 (cited hereafter at JD), as cited in Arrington, Fox, and May, *Building the City of God*, p. 149.

25. See Arrington, Fox, and May, *Building the City of God*, pp. 149–52. The movement to incorporation was said to be necessary in order to protect against legal harassment. See also pp. 160–61, 169–71.

26. Arrington, Fox, and May, *Building the City of God*, pp. 136, 291. On polygamy, see Arrington, *Great Basin Kingdom*, Chapter 12.

27. JD 12:320–23 (8 October 1872), as cited in Arrington, Fox, and May, *Building the Kingdom of God*, p. 135. On the attitude of John Taylor toward the United Order, see Arrington, Fox, and May, *Building the City of God*, pp. 315–17. Many other reasons are given. For example: The Orders failed because of the influx of non-Mormons, lack of total participation, and the illness and age of Brigham Young. Pearl F. Jacobson, *Golden Sheaves From a Rich Field* (Richfield, Utah: Richfield Reaper Publishing Company, 1964), p. 62. In Rockville, Order farms were scattered, there were difficulties with water privileges, and a lack of unity. Wayne D. Stout, *A History of Rockville, Utah, 1862–1972* (Salt Lake City: n. p., 1972). In Pleasant Grove, "human nature" was the problem. The Arizona orders lacked markets, were exposed to the threats of nature, and expanded too thinly. (Peterson, *Take Up Your Mission*.) In Santa Clara, the United Order failed because the participants were all "rugged individuals" (Andrew K. Larson, "Santa Clara," in *Agriculture Pioneering in the Virgin River* [Provo, Utah: Brigham Young University Press, n. d.]). In Mt. Pleasant, the resources of the Order would not furnish sufficient employment, and in Kingston, an influx of people with nothing discouraged the original members. In Hebron, "interest failed" (Newell R. Frei, *History of Pioneering in Shoal Creek* [Provo, Utah: Brigham Young University Press, 1932]).

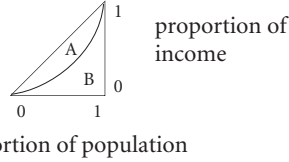
28. Arrington, Fox, and May. *Building the City of God*, Chapter 11. The least successful of the United Orders in the sample was the one at Cedar City, which failed by the end of 1874. The control cities generally had organized United Orders, but they had either not operated at all, or had failed after a short time. The exception was Logan, which had two very successful United Orders, but they were really nothing more than capitalist profit-sharing or joint stock companies which enjoyed widespread ownership and participation. The Logan enterprises were not as all-encompassing as the Brigham City United Order.

29. Eighteen sixty-eight was chosen because it was a pre-railroad year and not a "grasshopper" year, as was 1867. Eighteen seventy-two was post-railroad and pre-United Order. Eighteen seventy-three was not used because of the panic and depression in that year. Eighteen seventy-four was the year in which the United Order was started.

Eighteen seventy-five was the first full year of operation of the United Order branches in our sample (Cedar City had failed). In 1876 some of the Orders—Fairview and Mt. Pleasant—were beginning to show signs of collapse (Fairview apparently failed in 1877, and Mt. Pleasant in 1876 or 1877; Monroe was dissolved in 1876). By 1880, all but three of the United Orders had failed. Orderville was going strong, but Brigham City and Kanab had serious problems.

30. The Gini concentration ratio is defined as twice the size of the area lying between the Lorenz curve and the 45-degree line in the accompanying figure.

$$\text{Gini ratio} = 2A = \frac{A}{A + B}$$



31. The procedure involves the use of a computer program which calculates the maximum likelihood estimate of the Gini concentration ratio, based on the Gamma distribution.

32. The Utah Central Railroad was completed in 1870, the Utah Southern was completed to Lehi in 1872, and the Utah Northern was completed to Cache Valley in 1872. (See Arrington, *Great Basin Kingdom*, Chapter 9.)

33. In our sample, all but the Orderville United Order were organized in 1874. Orderville was organized in 1875.

34. In our sample, only the Cedar City United Order failed in 1874. All of the other Orders continued at least through 1876.

35. Leonard J. Arrington shows that there was a significant decrease in equality in the distribution of taxable income in Utah between 1866–1867 and 1871, as measured by the slope of the Pareto curve. From 1.76 in 1866–1867, the slope falls to 1.09 in 1871. He attributes this to the coming of the railroad in 1869. (Arrington, “Taxable Income in Utah, 1862–1872,” *Utah Historical Quarterly* 24 [January 1956]: 21–47.)

36. Most of the changes took place in 1875, the first full year of operation of the Order. The percentage change from 1874 to 1875 in the Gini ratio was:

Cedar City	5	Mt. Pleasant	3	Kanab	11
Beaver	7	Manti	4	Long Valley	-10
Fairview	14	Monroe	18	Brigham City	-3
Manti	4	Fillmore	-2	Logan	-2
Average UO	8 (10 without Brigham City)				
Average control	-1				

37. The percentage change in the Gini ratio from 1874 to 1875 is 15 for the United Order cities, -2 for the control cities, and 3 for the entire sample.

38. There are several specific ways in which the assumption of self-interest can be changed, i.e., in which “unselfishness” can be assumed. Sen, “Labor Allocation,” provides one way. For the purposes of the United Order, perhaps an appropriate assumption would be that suggested by B. Michael Pritchett of Brigham Young University in an unpublished manuscript “Economic Equality and Radical Institutionalism.” This paper describes a utility function which makes operational the injunction to “love thy neighbor as thyself.” The individual is required “to perceive consumption of any of the real good equally, whether that consumption is performed himself or some k^{th} individual, his neighbor.” Pritchett shows that this assumption, together with that of diminishing marginal utility of consumption, results in utility maximization with equal shares of

each of the good. We can apply this “Christian” utility to the theory of producer cooperatives and show that all of the problems with incentives in collectives and communes disappear. Thus, a producer cooperative (collective or commune) in which neighborly love has replaced selfishness should not be subject to the problems predicted by the standard theory. The evidence is overwhelming that the Orderville United Order was such a place. Thus, (the applicable) economic theory does explain the success of Orderville, as well as the other Orders where that “change in the nature of man” was not realized.

39. See, for example, Arrington, Fox, and May, *Building the City of God*, p. 278.

40. Mean debits are greater than mean credits in Cedar City, 1874, by a ratio of more than 2:1. This helps explain why the Cedar City Order failed to continue another year.

41. Tom S. Sale, III, “Interstate Analysis of the Size Distribution of Family Income, 1950–1970,” *Southern Economic Journal* 40 (January 1974):434–41.

42. Those included as members are individuals in 1872 who were found on the United Order accounts in 1874–76 (1879–80 for Orderville).

43. For example, Cedar City United Order members had a mean income in 1874 of \$522, the largest, by far, of any group in the comparison. Yet, a look at Table 5 reveals that the average credit earned by those same people was only \$54, only one-tenth of total income and by far the smallest mean credit in the study.