

The Varying Fertilities of the Amish Groups of Holmes County, Ohio

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Abstract: The Amish are known for their high fertility, and one of the groups, the Swartzentruber Amish, is known for its exceptionally large families. Opinions vary about the number, but there are many distinct Amish affiliations in the Holmes County, Ohio, area, ranging from the progressive New Order Amish to the ultraconservative Swartzentruber Amish. In this study, fertility was calculated for the five groups large enough for such analysis. The fertilities (i.e., number of live births for women 45 years and over) were notably congruent with the degree of conservatism (from progressive to conservative): New Order, 5.76; Old Order, 6.09; Dan or Andy Weaver, 7.79; Hostetler, 8.68; Swartzentruber, 10.42. The families of the Old Order group (the only group large enough) were subdivided into farming and nonfarming subgroups and families of ministers and families of laymen for fertility comparisons. The farming families subgroup had a higher fertility rate (6.88) than the nonfarming subgroup (5.90), presumably because their labor-intensive work of farming begs for large families. The ministers' family subgroup also had a higher fertility (6.54) than the laymen's family subgroup (5.89), the difference being attributed to ministers having a deeper religious commitment than laymen. The interval between marriage and first birth was nearly the same for all five groups. For the Swartzentruber Amish, the interbirth intervals remained short throughout the reproductive span, but for the other four groups, they became progressively longer. The reproductive span of women in the New Order Amish group was 13.75 years. It was progressively longer for the more conservative groups and was longest (17.74 years) for Swartzentruber Amish. These results are consistent with other studies that showed that people with more intense religious practice have larger families than people whose religious practice is less intense.

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Introduction

The Holmes County, Ohio, Amish settlement began in 1809/10 when land in this part of the state became available for settlement. The first Amish settlers came from Somerset, Pennsylvania, in 1810 and were followed by many more settlers in subsequent years. Today, the settlement is spread out over parts of six counties with a population estimated at nearly 39,000 (Young Center, 2022).

The Amish are well known for their high fertility and large families. Historically, the Amish have been largely farmers, a long-standing tradition brought along from Europe where their farming skills were legend (Nolt, 2015). The farms were family farms where integrated mixed farming was practiced. These farms were labor-intensive, and the children were well integrated into the farming operation. Large families were favored because the labor of the family's children was much valued.



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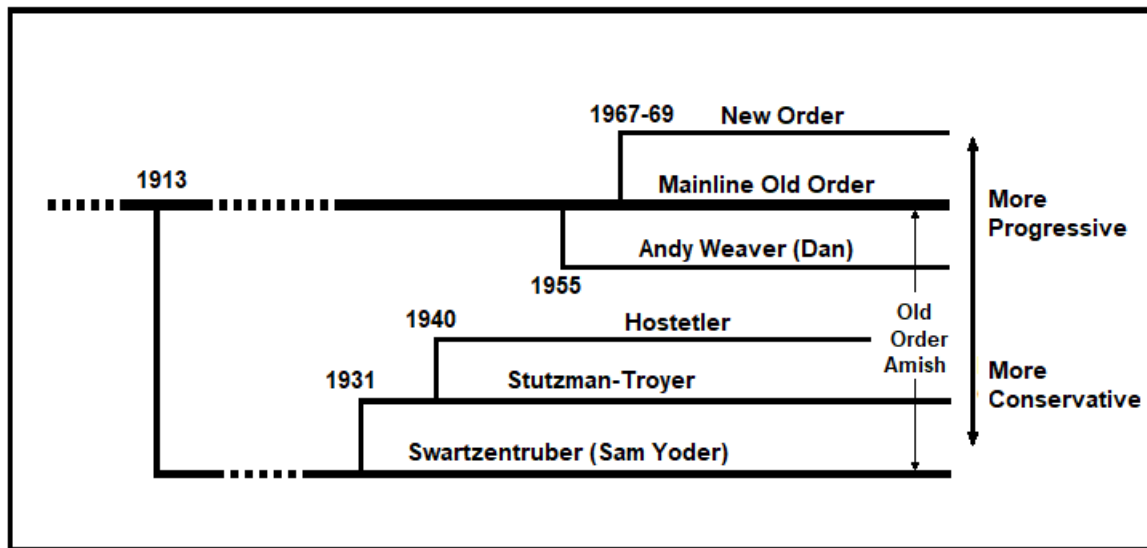
Amish farmers had horses (for draft), cows, chickens, and hogs. Their field crops were wheat, oats, corn, clover hay, and timothy hay, none of which were sold for cash but were fed to the animals. The Amish farmers then sold milk, eggs, fattened hogs, and sometimes calves.

Communities of large families like the Amish grow rapidly, with a doubling time of 20 to 25 years (Donnermeyer, 2021). As the Amish population in eastern Ohio grew, and the area became more concentrated, much foment occurred. Disagreements surfaced on the finer points of their theological understanding and personal conduct of their austere lives, resulting in divisions (Hurst & McConnell, 2010).

Beginning in 1913, one faction of Amish, led by bishop Samuel Yoder, decided that they should live more radically isolated from the host society and maximally reduce the host society's (worldly) influence. By 1917, they had split off and became known as the Swartzentruber Amish; today they are the most conservative of the Amish groups. (Within the Amish community, they are known as the Sam Yoder church.) During the early 1930s, the Troyer (or Stutzman-Troyer) group split off from the Swartzentruber group, and a little later, the Hostetler faction split from it. Still later, the Dan Church (more conservative, led by bishop Andy Weaver) split from the mainline Old Order Amish (primarily over the application of the ban). In 1967, the New Order Amish (more liberal and with more emphasis on spirituality and clean living) split from the mainline Old Order Amish. Most members of the Stutzman-Troyer group subsequently migrated out of the Holmes County area, leaving the five groups of Amish that are the subjects of this study.

Figure 1

Historic Relationships of the Various Holmes County Amish Groups



Some Amish families moved out of the Holmes County area due to these divisions, but a large share of the Amish of each of the five factions studied here remained in the parent settlement. Today, the members of each of these Amish affiliations, plus a few minor ones, all live among one another, each practicing their version of the Christian faith. The five groups of Amish in this

analysis could be placed along a continuum from the most progressive to the most conservative, in the following order: New Order Amish, mainline Old Order Amish, Dan Church or Andy Weaver Amish, Hostetler Amish, and Swartzentruber Amish. It is common local knowledge that the more conservative factions have larger families than the more progressive factions. However, the proximate determinants for the various fertilities of the different Amish groups are not well known, requiring a more focused statistical analysis.

Aim of the Study

The aim of this study was, first, to determine the total fertility rate (TFR; Bogue, 1969) of each of the five distinct Holmes County Amish groups and then to look for explanations for the different rates. Since these five groups all live among one another in the same geographic area and are of uniform ethnic origin, any environmental or genetic variables are largely nullified.

Methods

The Swartzentruber group is the most conservative and has the highest fertility. The New Order group, on the other end of the spectrum, is the most progressive and has the lowest fertility. So, if one Amish community has a higher fertility rate than another, what is the basis for the difference, short of adoption of various birth control practices and medications? There are a limited number of methods that could account for lower fertilities: delayed marriage, longer interbirth intervals, shorter childbearing period (stopping behavior). Would such a difference be driven by a practical need for more children (more children to work on the labor-intensive family farm), a social/psychological mindset that says that more children are better than fewer, or some perceived mandate from a higher power for many children?

Amish also exhibit a high rate of twinning (Cross & McKusick, 1970; Troyer, 2022). A high rate of twinning could theoretically influence the fertility rate, but practically, an excessively high rate of twinning could have only a small and undiscernible effect on total count. No published study has found any such divisional differences in twinning.

The fertility behavior of five different groups of Amish in Holmes County was collected to study and compare the length of the childbearing periods (calculated from marriage age and the age at the end of the childbearing span) and the interbirth intervals. For the first four groups—New Order Amish, mainline Old Order Amish, Dan Church, and Hostetler Amish—the study was limited to families whose wives/mothers were born before 1974. For the Swartzentruber Amish, the most conservative of all five, the study used families whose wives/mothers were born before 1956.

Family data from various sources were collected for this study:

1. *Ohio Amish Directory: Holmes County and Vicinity, 2020* (Wengerd, 2020). Source of data for the mainline Old Order Amish, the New Order, the Dan Church (or Andy Weaver group), and the Hostetler group. The data in this directory was collected during the first three months of 2019.

2. *History and Descendants of Peter and Elizabeth (Yoder) Hershberger, 1810–2002* (D. Miller, 2002). Source for Swartzentruber Amish families, with the assistance of Adam Hershberger of the Ohio Amish Library, Berlin, Ohio.
3. *The History and Genealogy of David D. Troyer and Anna Stutzman, 1813–2003* (Troyer, 2003). Data of some Swartzentruber Amish families were selected, based on personal knowledge.
4. The SAGA-OMII website of the Swiss Anabaptist Genealogical Society of Kidron, Ohio. Source of data for additional Swartzentruber Amish families and also used for confirming, correcting, and supplementing family information from other sources.

The mean of the first five interbirth intervals, as well as the mean lengths of the reproductive spans, were calculated for each of the five groups. The first of the five intervals is the marriage-first birth segment.

The data for the first four Amish groups were taken from *Ohio Amish Directory: Holmes County and Vicinity, 2020* (Wengerd, 2020), and all families/households were encoded. The Swartzentruber Amish do not participate in the directory, so their information had to be taken from other sources, such as genealogies in the Hershberger-Yoder genealogy, where most of the families are known to be Swartzentruber Amish. Families used for this study had to be selected carefully because one could not always be sure that they were of the Swartzentruber faith; they may have left and joined another group. In the genealogy, they identify themselves only as “Amish” or “Old Order Amish,” not as Swartzentruber Amish.

As the data for the Swartzentruber Amish were taken from sources other than settlement directories, it became evident that, while encoding the data, bias could enter if some of the families with few or no children were overlooked. Thus, special care was taken to make sure that small families were not overlooked.

The data for the mainline Old Order Amish group was divided into farming families and nonfarming families for the purpose of calculating and comparing their fertility rates. This data was also divided into laymen’s and ministers’ families to compare the fertility rates of the two groups.

Results

The completed fertilities of the five groups were calculated and are presented in Table 1. A strong gradient exists in the fertility results, where the fertility of the Swartzentruber Amish group (10.42) is about 81% greater than that of the New Order Amish (5.76). The average total fertility rate of the mainline Old Order Amish is 6.09, 0.33 live births greater than that of the New Order Amish, and then jumps to 7.79 and 8.68, respectively, for the Dan church group and the Hostetler Amish. Table 1 also shows a similar progressive-to-conservative gradient in the fertility spans, ranging from 13.75 years (New Order) to 17.74 years (Swartzentruber). Figure 2 shows the interbirth intervals of the five groups. The length of the intervals for the Swartzentruber Amish is remarkably

similar through the first five intervals, whereas the length of the intervals for the other four groups generally lengthens from one interval to the next, creating a similar pattern among these four groups.

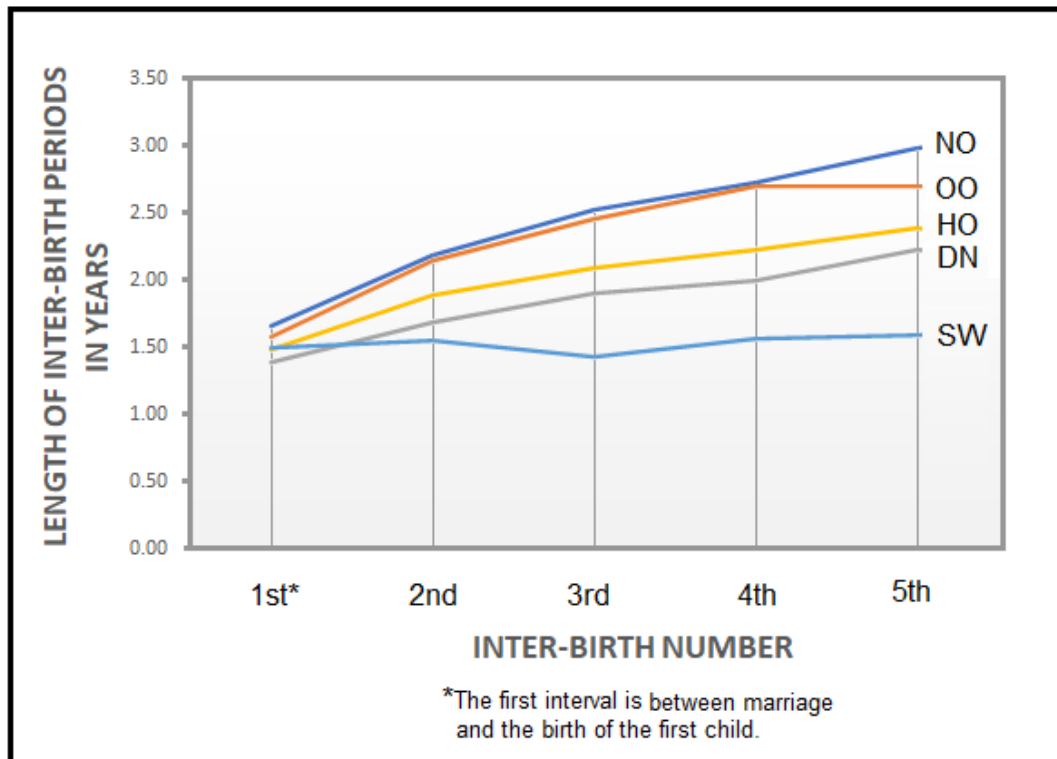
Table 1

Fertility Rate and Length of Reproductive Period

Amish church group	Total fertility rate	Length of reproductive period	Number of completed families
New Order	5.76	13.75	263
Mainline Old Order	6.09	13.69	2,247
Dan Church	7.79	14.73	314
Hostetler	8.68	16.48	71
Swartzentruber	10.42	17.74	164

Figure 2

Reproductive Periods of the Five Holmes County Amish Groups Comparing Their Interbirth Intervals



Note. NO = New Order; OO = Mainline Old Order; HO = Hostetler; DN = Dan Church; SW = Swartzentruber

Farming families have a higher fertility (6.88) than nonfarming families (5.90), and the families of Amish men who are ordained as bishops, ministers, or deacons are larger (6.54) than families of non-ordained Amish men (5.89), as shown in Table 2.

Table 2

Effect of Being a Farming Family or a Minister's Family on Fertility Rate

Group of Amish families	Total fertility rate	Number of families	Mean age of fathers
Farming families	6.89	144	57.56
Nonfarming families	5.91	1,660	60.71
Ministers' families	6.51	479	61.00
Laymen's families	5.93	1,500	62.70

Note. The total number of ministers' families plus laymen's families is six fewer than the total number of completed families because a few aged men are no longer counted among the ministers but are counted among the completed families. The combined total of farming families and nonfarming families is far short of the total number of completed families because a number of part-time farmers were ignored in the calculations.

Discussion

The Amish see themselves as a special people, separate from the rest of society so as to maintain their identity (Hostetler, 1993), and their religious practices pervade all aspects of their lives—their dress, their work, their worship, their socialization, and even their reproductive behavior. Hence, the large size of Amish families is somehow a reflection of their faith. The high fertility of the Amish should perhaps not be surprising to demographers, since high fertility has for many years been associated with strong religious practice (Lehrer, 1996; McQuillan, 2004; Adsera, 2006; Shaver, 2017). Women who say that their religious practice is important to them have larger families than those for whom religion is minimally important or not at all important (Hayford and Morgan, 2008).

It has often been asserted that the Amish practice natural fertility. Natural fertility is defined as the fertility that occurs when there is no conscious effort to limit the number of children born to a family. It is a widely held view that the Amish are opposed to birth control, and inquiries sometimes bring strong denials from Amish leaders (Cross and McKusick, 1970). Despite strong opinions regarding Amish nonuse of birth control methods, there are reports of widespread use of condoms in certain Amish communities. Jolly (2014) reported that a deeply respected non-Amish midwife was the source of books about condoms and birth control information for an Amish community she serves in Pennsylvania. K. Miller et al. (2007), working with Amish in Lancaster, Pennsylvania, reported that out of 249 married Amish women who responded to a questionnaire, 21% indicated that they were presently using birth control methods, half used condoms. That does not mean that family planning is common for all Amish people in all the scattered Amish settlements but there is no reason to believe that use of birth control by Amish people is limited to those in Pennsylvania. It is very likely that some Amish people practice family limitation in other

ways, perhaps ways that lie outside of our imagination range. For instance, Cross and McKusick (1970) stated that some Amish mothers encouraged their daughters to delay marriage in order to reduce the number of children they would bear.

The five groups of Amish that were the subjects of this study have widely different completed fertility rates, ranging from 5.76 children per family for the New Order Amish to 10.42 for the Swartzentruber Amish (Table 1). These five groups are all of the same ethnic stock, as Anabaptists all have the same European background, and all are scattered among one another in the same geographic area, but now they have widely varying fertilities. With that background, it is impossible to attribute the fertility variances to ethnic and cultural differences, so we must conclude that some Amish consciously or unconsciously do not limit to any considerable degree the size of their families, even though there is some evidence that some family limitation is being practiced.

The conclusion so far is that some Amish use birth control to some extent, and perhaps some use other methods to limit the size of their families. Therefore, the Amish do not practice natural fertility universally.

Is Hyperfertility Possible?

The curve described by the interbirth interval lengths of the mainline Old Order and the New Order Amish are very similar to each other but very different from that formed by the Swartzentruber Amish, and those differences are remarkably parallel to the group's completed fertility (Figure 2). The interbirth intervals of the mainline Old Order and New Order groups become progressively longer with increased parity (i.e., number of live births), forming a convex upward arch. The interbirth intervals of the Dan and Hostetler groups also become longer but to a lesser extent. However, the interbirth intervals of the Swartzentruber did not become longer with increased parity and are not arched—the “curve” is flat. What is responsible for keeping those interbirth intervals so short?

What attribute of the reproductive behavior is responsible for the greater fertility of one Amish group (e.g., the Swartzentruber group) compared with the other, more progressive groups? If either the reproductive span was lengthened or the interbirth intervals were shortened, the fertility would be greater. The data demonstrate unequivocally that both attributes are involved. By considering the reproductive behavior of the Swartzentruber group, it is hard to escape the conclusion that the group is approaching the maximum number of children that a woman can bear in a lifetime. Instead of an effort to limit family size (achieve fertility *lower* than natural fertility), *they attempt to increase family size* (achieve fertility *higher* than natural fertility). There is anecdotal evidence that Swartzentruber ministers pressure couples into having the maximum number of children. If so, that might help explain why their interbirth intervals tend to remain short throughout the reproductive span. This could be considered *hyperfertility*.

It is worth recalling that there were discussions about populations adjusting their fertility to their economic status or their need for children. High-fertility Anabaptist groups like the Amish and Hutterites may have moral scruples against limiting their fertility. Yet, Markle and Pasco (1977), after linking tax records with demographic data of the northern Indiana Amish, found a

positive correlation between family wealth and family size, suggesting that Amish family size depends on affordability.

The factors for explaining these widely varying fertilities are limited. The design of this study mitigates ethnicity, environment, and numerous other potential variables that could affect fertility. All of the groups share many aspects of the Christian faith, but there are subtle differences in how that faith is applied. For instance, the different affiliations of Amish vary widely in how broadly they apply the mandate “be in this world but not of it.” It would appear that the Swartzentruber Amish take this admonition to a greater extreme than the other groups. They are generally allowed only the Bible and Amish genealogy books in their homes. On the other hand, the New Order and the mainline Old Order groups allow access to practically all books on the market (although they would certainly have their own personal limitations). The Swartzentruber Amish are allowed only a few Amish-related newspapers but the more liberal groups have access to most media. Therefore, there is a big difference in the amount of exposure the different groups get to information outside their own Amish circles. This variation in information exposure opens up the possibility that the ethos (attitudes, values, character, moral beliefs) they share with the greater American society somehow influences the group’s reproductive behavior.

This study revealed several reproductive characteristics of all Amish groups that have been noted previously by other investigators. One is that higher-fertility women have shorter birth intervals and longer reproductive spans. Interbirth intervals become longer with increased parity and increased woman’s age. Some of the interbirth intervals of the Amish are remarkably short. A second child born within a year of the previous one is not uncommon. Frequently a matter of concern in the medical literature (Zhu et al., 1999), adverse perinatal outcomes associated with short interbirth intervals is blamed in part for poor outcomes such as low birth weight, preterm birth, and small size for gestational age, low birth weight being the most common according to J. Miller (1991). Birth intervals of 18 to 23 months have been established as optimal to avoid such consequences. There is no evidence, however, that the Amish, with their often short interbirth intervals, experience any of these adverse perinatal effects. K. Miller et al. (2007) reported that the Amish have the same number of preterm births as the non-Amish community, and in fact they have somewhat fewer low-birth-weight babies than the non-Amish community. Amish women’s birthing experiences appear to be quite different than those of non-Amish women (Jolly 2014). Amish women have shorter periods of labor and seem to experience less birthing pain than the non-Amish comparison group of women, which might account for better birth outcomes experienced by the Amish.

As already pointed out, Amish women tend to have short interbirth intervals, but the intervals vary among the five different Amish groups (Figure 2). As might be expected, New Order Amish have the longest interbirth intervals and shortest reproductive spans, whereas the Swartzentruber Amish at the other end of the conservative-progressive spectrum have the shortest interbirth intervals and longest reproductive spans. Also, the interbirth intervals of Swartzentruber Amish remain short with increased parity (at least for the first five intervals), the intervals of the Hostetler

and Dan Amish increase slowly, and the Old Order and New Order Amish increase more rapidly (Figure 2).

Amish Fertility Responds to Practical Circumstances

Wasao and Donnermeyer (1996) determined that Amish farming families had greater numbers of children than nonfarming Amish families. That observation was confirmed in the present study. The mainline Old Order group (the only group large enough for this purpose) was divided into farming and nonfarming subgroups, and we found a remarkable difference in the fertility rates of the two subgroups: 6.88 for farming families vs. 5.90 for nonfarming families. The finding suggests that the Amish adjust their fertility in response to their labor-intensive farming.

The Amish method of farming is quite labor-intensive, and the whole family is in some way involved in the farming effort. Children contribute greatly to the farming effort and are given work responsibilities beginning at a young age. The families that do not farm may struggle to find meaningful activities for their children. The children of farming families are a significant asset, whereas the children of nonfarming families are a family liability. Our data suggest that the Amish adjust their fertility depending on the family's need for child labor.

It is worth noting the study by Markle and Pasco (1977) in which they correlated Amish fertility and the family's financial situation. The better-off Amish women have more children, have longer first interbirth intervals, and have their last child at an older age than Amish women who were less well-off.

Wasao and Donnermeyer (1996) also detected a fertility variance between ministers' families and laymen's families, an observation that was confirmed in the present study. The mainline Old Order group was divided into ministers' families and laymen's families. The fertility of the minister' subgroup was higher than that of the laymen's subgroup by three-fourths of a unit: 6.54 vs. 5.89. The role of church leadership assumed by Amish ministers most likely means that they are expected to adhere more conscientiously to the Amish norm than Amish lay persons.

A selection bias might also be operative. It is safe to assume that a congregation will elect a person to the ministry they feel is most qualified. Those qualifications may be congeniality, intelligence, and ability to communicate. Men considered for the ministry might also be selected because they have larger families and appear more spiritual (and perhaps more qualified) than other church members (Kraybill et al., 2013). It is also possible that being ordained comes first and then the couple has more children as the role of minister presents them with a responsibility for exhibiting deeper religious commitment.

It seems intuitive that the mechanism that accounts for the greater fertility of the more conservative Amish groups is also responsible for the greater fertility among the religiously more conservative people in the general American population, yet the common denominator remains elusive. Is it a greater sense of being right? Or a greater sense of being in close relationship to a divine being? Or a sense of being a special (chosen) people?

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