



Chapter 1, Background of the Study

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CHAPTER I
BACKGROUND OF THE STUDY

Introduction

Data for the present study are derived from vital statistics and genealogical records of the town of Deerfield, Massachusetts. Fieldwork was done during the summers of 1968-1969, and consisted primarily of library research in the Deerfield area, and re-recording the information for computer use. The period of time covered by these records is between 1680 and 1850, or, 170 years.

Massachusetts provides good opportunities for historic population research, since registration of births, deaths, and marriages was made compulsory in 1639 (Spiegelman, 1968:3). Deerfield was selected as the community for study after a number of small towns in northwestern Massachusetts were considered. The reason Deerfield was chosen is because available records appeared to be very complete. The community of Deerfield's own emphasis on its long history, and efforts by such specific groups as the Pocumtuck Valley Memorial Association (founded in 1870), and the Heritage Foundation, provide for a good library with many well preserved records. Although several references concerning Deerfield and Massachusetts are consulted, the major sources for the information presented below are Baldwin's Vital Records of Deerfield, Massachusetts to the Year 1850 (1920); and George Sheldon's History of Deerfield (1896). The major emphasis is on the complete records given in Baldwin

(1920) with supplementary information being added from Sheldon's published genealogies (pp. 4-407, Vol. II). Sheldon's work is considered by many colonial historians to be a very well written and thorough local history. The vital statistics compiled by Baldwin appear to be very complete considering the time period covered and are based on grave inscriptions as well as town and parish records. These statistics include 4943 births, 1485 marriages, and 2204 deaths. In an effort to test the accuracy of the records, the local cemeteries around Deerfield were sample surveyed, and virtually 100 percent of the cemetery markers checked are found in Baldwin.

Description of Deerfield

Deerfield is located in northwestern Massachusetts at the confluence of the Deerfield and Connecticut Rivers, approximately 30 miles north of Springfield (Figure 1.1). The town was formally established in 1673 and has been a rural, largely agricultural community since its founding. Today the town is most well known for its fine preparatory school, Deerfield Academy, and for its attractive and excellent restoration as a colonial town (see McDowell, 1969; Phelps, 1970).

During the early settlement period of the Deerfield region goods and supplies came to the Connecticut Valley (Pioneer Valley) by way of the River; however, many of the early communities were settled by families who trekked through the forests from eastern Massachusetts. Many of the founders came from the Massachusetts Bay Colony or its descendents and were in search of good farming land. Deerfield's first residents tended to come from villages to the south and along the River (e.g.

Northampton, Hadley, Hatfield), but the original land grant came from the "mother-town" of Dedham, near Boston. Deerfield, or Pocumtuck as the original community was called, was the northwest frontier settlement of New England. Thus, although communication was maintained along the Connecticut River to the south, Deerfield and its nearest neighbors were strongly influenced by the Indian tribes and wilderness to the north and west of them.

The early history of Deerfield did not include the tranquility that prevails today. By virtue of its location, Deerfield played a very prominent role in the history of the Colonial-Indian wars. This period in Early American history has been described in detail by many (e.g. Sylvester, 1910) and one of the most famous incidents is the Deerfield Massacre of 1704. In this raid a group of French-Canadians and Indians attacked Deerfield at daybreak, killed 48 people, and took 111 prisoners to Canada. In spite of this defeat, many of the prisoners ultimately returned to Deerfield and resettled. Following this tragic event Deerfield reestablished itself and through subsequent contacts with Indians and the Revolutionary War remained a very successful community.

Demographic Background

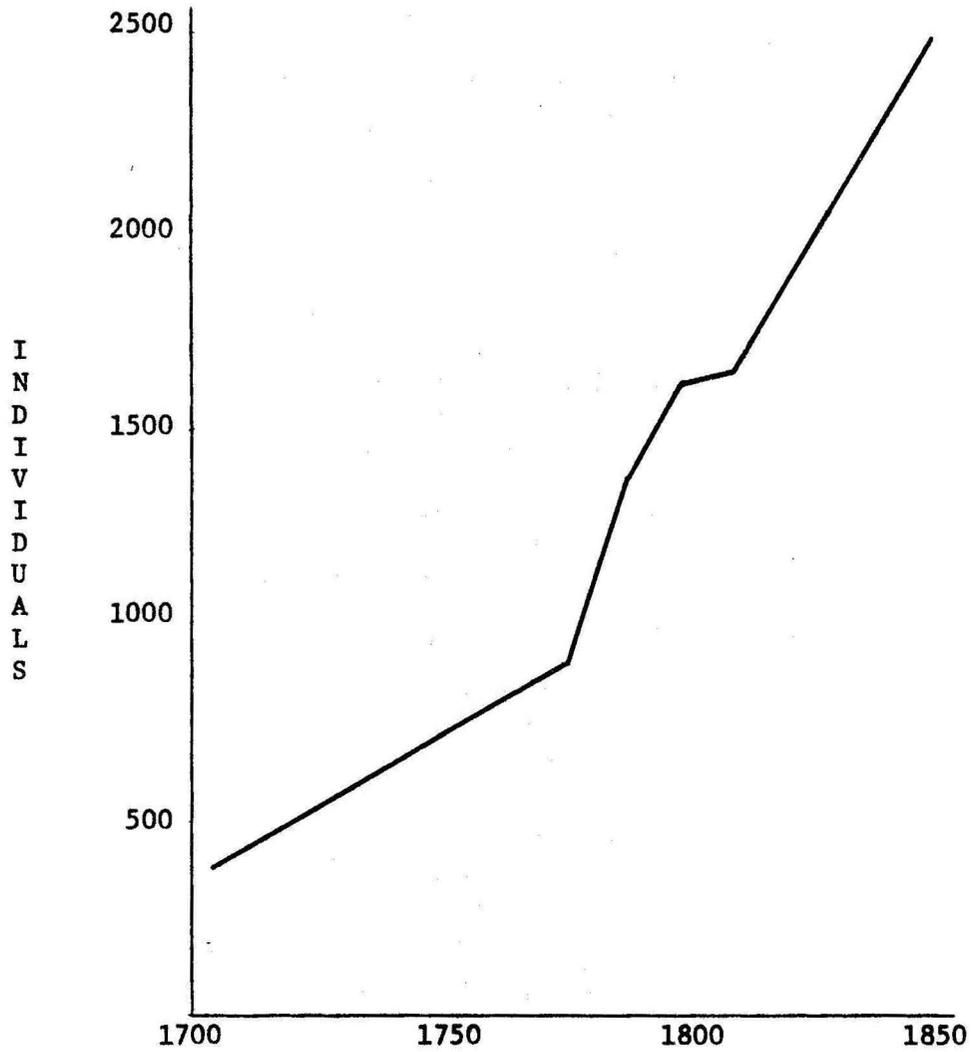
The time depth, growth features, and relative stability of Deerfield make it an ideal community for the proposed study. Although Deerfield suffered the large scale Indian massacre in 1704, and occasional minor uprisings until the 1740's, the town was generally under stable influences in comparison to the coastal and industrial communities of early Massachusetts. The founder population was composed of

families, providing for a relatively well balanced sex ratio from the town's inception. Migration tends to be ethnically stable for the time period under study. Economically, the Connecticut Valley is a very fertile farmland and this had positive effects on the health and growth of the local population.

Over the 170 year period covered by the present study, the town experienced steady, rapid growth (Figure 1.2). This growth arises from immigration as well as high local fertility. A comparison of the crude birth and death rates (Figure 1.3) reveal that, on the average, Deerfield had a relatively high birth rate and relatively low death rate for the period under study. The rates would compare favorably, for example, with the rates of Transitional or Advanced countries in the world today (Zelinsky, 1966). A lack of census information for the years 1704-65 produces the straight line effect in Figure 1.2, and this is not a very true reflection of the presumed rates. However, the high mortality of 1704, the result of an Indian massacre, would certainly cause mortality to drop in the direction observed. The slight increase in death rates between 1765-1850 may be explained by two factors: (1) there is the possibility of underenumeration during the earlier years covered; and, (2) a very likely cause is the fact that the population is becoming older and a larger fraction of the population is reaching maximum longevity. In a recently settled population, such as early Deerfield, it is common for the individuals to be relatively young; as stability and growth follow, the population profile changes to include a larger fraction of very young and old.

Suich (1966) in a brief survey of vital statistics for Deerfield in the 1700's, finds the mean age at marriage to be 26.3 for males and

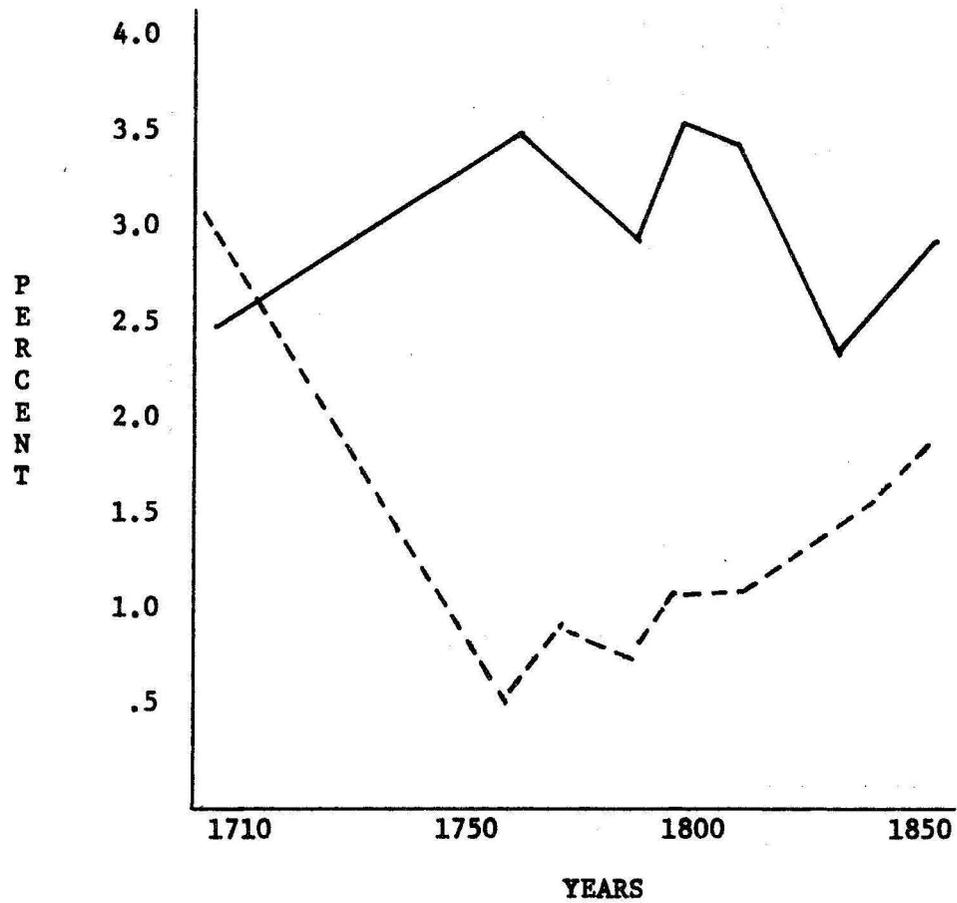
FIGURE 1.2
POPULATION GROWTH IN DEERFIELD
1700-1850



Source: Sheldon, 1896; Dickinson, 1818;
U.S. Bureau of the Census, 1790.

FIGURE 1.3

CRUDE BIRTH AND DEATH RATES* FOR DEERFIELD 1700-1850



Solid Line = Births. Dotted Line = Deaths.

*Rates based on a 3 year average, including the year following and the year preceding dates shown.

22.7 for females. These values are close to those found for other early American populations (Demos, 1965; U.S. Bureau of the Census, 1960). The mean number of children is 7.2 prior to 1765 (Suick:18) and this compares closely with the value of 7.06 which I found for 100 families and including marriages after 1765.

TABLE 1.1
AVERAGE LIFE EXPECTANCY IN DEERFIELD: 1745-1765

Age	Male	Female
Birth	45.0	45.8
1	51.9	52.9
10	59.4	59.3
20	63.8	63.1

Source: Suick, 1966:1

Life expectancy tends to be quite high for Deerfield (Table 1.1) when compared with other available figures. The expectancy of around 45 years for the population at birth, is in contrast to the estimate of 35.5 for the general population of Massachusetts and New Hampshire prior to 1789 (Dublin, 1949:35). The high value for Deerfield is indicative of a quality of life that was probably common for the more prosperous rural communities of early New England. Lower life expectancies would be expected from the more urbanized and industrialized areas. Little information can be found concerning

the characteristics of morbidity; however, one report concerning health and mortality for the period 1787-1816 is given by the Gazetteer Dickinson (1818:6): "The number of deaths which have occurred in this place, according to the parish register, since the year 1787, a period of 29 years, have been 510. This upon an average is a fraction over 17 a year. It appears that 59 of these have died of consumption, 66 of dysentary, and 48 of fevers. The greatest number of deaths which have occurred in any one year from consumption is 7, from dysentary 38, and from fevers 22." Thus, although disease and death were certainly problems to be concerned with, the general impression from vital statistics on Deerfield is that it was a very healthy and congenial place to live during most of the 1700 and 1800's.

The Problem

Data for the present study are comprised of: (1) the marriage records from 1680-1849, originally listed in Baldwin (1920) and supplemented by notes from Sheldon (1896); and, (2) selected samples of fertility and other family parameters for the same period. The scope of the present study is more limited and specific than the data collected will eventually permit, and represents an initial analysis of the genetic structure of Deerfield.

In The Problem of the Structure of Isolates and of Their Evolution Among Human Populations, Sutter and Tran-Ngoc-Toan (1957:379) observe that theories of population genetics, in their initial assumptions, often depart greatly from reality. In fact, it is often assumed that the population is supposed to be closed, marriages to take place at random, and fertility to be identical for all couples. The problem which will be discussed in this paper is the empirical determination of departures

from these conditions, and their subsequent implications. This is done by an investigation of three relevant areas: (1) population numbers; (2) migration; and, (3) selection.

In experimental breeding populations it is not difficult to control variables to meet assumptions, but with man, and with natural populations of other animals, conditions and assumptions may be highly disparate. Also, in man, another dimension is added, the cultural dimension. In addition to all the biological parameters that may affect population structure, man introduces cultural factors affecting mating, fertility and migration. These cultural factors can have genetic significance and should be taken into account. In the present study I will be concerned with cultural variability that may ultimately have an effect on genetic structure.

The nature of historical samples is such that many question their validity. While poor enumeration is always a possible problem, it may be counteracted by the profits gained in the time-depth which historical analyses permit. My own impression is that the materials from Deerfield are very complete, though certainly not perfect; evidence from cross-referencing sources confirms this impression. In addition, I have attempted to design the analysis of the genetic structure of Deerfield, so that errors of underenumeration will randomly affect the results obtained, and not bias the differences tested. The rejection or acceptance of the findings must, of course, ultimately come from the critical reader.

I should emphasize here that those of us who engage in research using historical records are ultimately dependent upon the temperament, conviction, and morality of the subject population. It should be evident

to all that people and names are not genes and that social and biological ancestry are not necessarily one and the same. However, in this last consideration, I place a large amount of faith in the fathers of Deerfield. All the evidence available to me indicates that Deerfield was a community of people that lived and respected the Puritan Tradition. The town was small enough so that the possibility of knowing what other people were doing was great, and the church was judicially as well as spiritually influential concerning morality. An excerpt from Sheldon's *Genealogies* (1896:106) testifies to the former point regarding a particular Deerfield citizen: "...June 18, 1772, he was arraigned before the church for 'unnecessarily absenting himself from public worship and the ordinance of the Lord's Supper, and accusing the church of oppression;' he acknowledge the truth of the complaint, but professing himself willing 'to be rectified in his sentiments if they were mistaken;' sentence was deferred to the 29th, 'when said Catlin appeared sensible of his error and was restored to good standing.'"

