## 3.3. Project Design, Rationale and Data Collection

It was in the light of the above studies that the strategy for this project was devised. Originally, in the very early conceptual stages, I had intended to sample all years of the eighteenth century in Massachusetts and South Carolina, but it became clear that the "glorious profusion" of the probate inventories quickly becomes an *embarras de richesse*:[353] One is faced with thousands upon thousands of such inventories. Thus, I decided to analyze a number of years instead of the entire century, finding the years between 1732 and 1791 particularly suitable and logical at the same time. 1791 was easily determined in light of the fact that the Bill of Rights, including the second Amendment, was ratified in that year. The starting point was much more difficult to define. South Carolina became a royal colony in 1730 after a period of upheaval and administrative chaos, suggesting that year as a significant caesura in the colony's history.[354] In the end, however, the determining factor was the relative scarcity of probate records before that time. Only a handful of inventories have survived from the proprietary period and those for the interregnum number around 400.[355] Only with the onset of the new record series of the *Recorded Instruments of the Secretary of State* in 1732 is there a solid base of sources available. With the timeframe 1732 to 1791 established, I decided to refrain from using equidistant intervals but rather to pick some years specifically. Particularly, I wanted to see whether the colonial wars of the period had a visible impact upon the amount of firearms listed in inventories. In addition, I chose a small 'control group' early in my timeframe by random selection.[356] I handpicked the years 1752, 1759, 1765 and 1771, 1779, and 1786 to investigate the situation for the French and Indian and Revolutionary Wars, respectively, the longest and most destructive wars on the American continent during the eighteenth century. The random selection process of four more years from the first decade of my timeframe yielded the years 1735, 1739, 1740 and 1743.[357]

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[353] Main, "Probate Records as a Source for Early American History," 89.

[354] It is actually quite difficult to establish when exactly South Carolina became a royal colony. See Chapter 2 for this issue.

[355] Charles H. Lesser, *South Carolina Begins: The Records of a Proprietary Colony, 1663-1721.* (Columbia, SC: South Carolina Division of Archives and History, 1995).

[356] At a first glance, the term control group may not seem entirely fitting, as it does not cover the same time frame as the results to be 'controlled.' Yet, I believe that this little group will still serve to give some context as to the plausibility of the results for the hand-picked years.

[357] In the years before 1752, when the Julian calender was still in force in Britain and her colonies, and dates on inventories followed the convention that the year began on 25 March, I have reckoned according to the Gregorian calender. Thus, 1 January through 24 March 1734 in the Old Style (frequently noted in the documents as 1734/35) I have counted as belonging to 1735, and accordingly for other years. For the details of the

For these ten years, I wanted to analyze the probate inventories of Massachusetts and South Carolina for the presence or absence of firearms. Additionally, I wanted to be able not only to make inferences about the levels of arms ownership in the colonies and states in general, but, if possible, add a geographic dimension: Did, for example, inventories on the 'frontier' show more guns than those of Boston? Or did South Carolina inventories in areas with many slaves have a greater occurrence of firearms than those where slavery was less prevalent? As inventories frequently do not give the name of the place where the decedent lived, the counties were the only category available as a geographic determinant. In South Carolina, where probate was administered in Charleston for the entire province during most of the eighteenth century, no such determination was reliably possible for the years before 1785.

The decision to undertake analysis by counties had important ramifications for the design of the sample. Statistically, the larger the universe of a sampling project, the smaller the sample can be relative to the universe. For Massachusetts, however, with eleven counties to be analyzed in ten years, we have 110 separate universes each of which needs to be dealt with separately. As these universes are mostly very small, a very great proportion of them needs to be examined in order to obtain reliable results. In the light of these necessities, I decided to drop the counties of Barnstable, Middlesex, Plymouth and Worcester.[358]

The next step was to establish a firm basis for the sampling process, i.e. to determine the statistical universe for each of the remaining counties for each year. For that purpose, I compiled a list of the inventories taken or registered in the years under consideration in each of the counties in Massachusetts.[359] In some counties, the docket books were arranged chronologically, so that it was relatively easy to obtain all the inventories for a specific year. In most, however, docket books were arranged alphabetically and accordingly were unsuitable to bring together inventories for a particular time period. In these cases, I perused

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English calendar see Hermann Grotefend, *Taschenbuch Der Zeitrechnung Des Deutschen Mittelalters Und Der Neuzeit*, 13. ed. (Hannover: Hahn, 1991) especially 13.

[358] Barnstable and Plymouth counties represent the south-eastern coastal counties which are, in my opinion, sufficiently represented by Bristol, Dukes, and Nantucket counties. Middlesex contained densely settled areas near Boston and rural areas further inland, being thus very similar to Essex and Suffolk counties. Worcester is a landlocked county similar in that respect to Hampshire and Berkshire. Furthermore, the records for both Worcester and Middlesex were in very bad shape, both in their physical state and their internal arrangement, which would have made any extended work with them extremely troublesome. See Appendix II for maps of Massachusetts and South Carolina.

[359] A problem appeared at that time with the overlap of the Gregorian year and the English year from 1 January to 24 March and the consecutive years of 1739 and 1740 in my sample. As it was often difficult to determine a single date for an inventory – it might have been compiled in December of 1739 and registered in January 1739/40 – the size of the universes for 1739 in generally larger than for 1740.

the actual record books. However, this act of tabulating data is often a very time-consuming affair. William Aydelotte has stated the fact very succinctly: "Also the task of correctly recording so great a mass of data is more arduous than is likely to be believed by anyone who has not tried it."[360] The data thus obtained I then entered into a database for easier handling: At that time, the combined universes for ten years and seven counties numbered 2772 inventories.

As probate was administered centrally in South Carolina, I only had to contend with a single universe per year, while at the same time losing the geographical dimension that is available in Massachusetts: For that state, it will be largely impossible to say whether there is a difference in gun ownership between the Tidewater, the Piedmont and the upcountry. Only for the last of my years were records for the backcountry available. In 1785, South Carolina erected county and district courts and lodged the responsibility for the administration of probate in these more localized institutions.[361] However, the vagaries of South Carolina's history render analysis very difficult: During the Civil War, many of the colonial records of the state were destroyed when Columbia went up in flames at the hand of Union troops. Thus, only the probate records of Charleston District and Camden District were available for 1786. For three others, Abbeville County, Barnwell District and Newberry District, I have substituted the still very sparse records of 1787 to get at least some backcountry material. Even so, I only found a total of 142 inventories for the years 1786 and 1787 for the entire state: Charleston District had the most with 104, Camden District had 30, while Abbeville, Barnwell and Newberry had three, three and two, respectively. Accordingly, I must say clearly that the reliability of the backcountry data is seriously compromised by the scarcity, even lack of records.

For the other years, gathering inventories to establish the statistical universe was not overly complicated. For the years between 1732 and 1785, the inventories were collected in the *Recorded Instruments of the Secretary of the Colony*. The volume covering 1732 to 1736 was in the *Miscellaneous Records* of that series, while the rest were in a dedicated series of *Inventory Books*. Furthermore, the Works Progress Administration during the New Deal produced typescript transcripts of many inventories. Those transcripts were conducted under professional direction, proofread and even distributed to the courts which held the original records for reference and use there. Some comparisons between the original record books and the transcripts confirmed the impression that the quality was generally very good and the transcripts thus reliable. Also, many of the original volumes have deteriorated considerably since the 1930s, often making them all but illegible, a fact compounded by the very poor quality of much of the early

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[360] Aydelotte, "Quantification in History," 12. See also Eric H. Monkkonen, "The Challenge of Quantitative History," *Historical Methods* 17, no. 3 (1984): 90.

[361] See footnote 328 above.

microfilm of the records. Hence, whenever possible, I worked with the WPA transcripts. In collecting inventories, I further discovered that no inventories existed for 1779 and substituted those of 1780. I again compiled a list of all inventories either written or recorded in the years under investigation. At the end of this step, I had collected a total of 889 inventories for South Carolina's 14 universes featured in my study.

The inventories from Massachusetts and South Carolina I entered into a database in Microsoft Access, completing them with necessary identifying information. For the Massachusetts counties of Dukes and Nantucket, I did not enter the universes into the database, because I had compiled them separately in Microsoft Excel spreadsheets, from which I drew the samples for these two counties. The sampled cases, however, have been entered into the master table in Access.

For every record, I had Access automatically assign a record ID number and included the decedent's last name, first name, sex, additional name information (such as 'Doctor' or 'Captain'), a geographical identifier, the date on the inventory, an ID for the archival location of the record, as well as categories for general notes and particularly important information.

After the various samples were drawn, I entered further information on the inventories drawn into the samples. At that time, I included information on the amount of firearms enumerated in an inventory, the number of slaves enumerated, as well as text categories for both guns and slaves for further information. I also entered the value of the inventory whenever it was summed up, as well as an identifier for the currency in which the valuation had taken place, whenever such could be determined.[362]

Sample Rationale and Design

Sampling and statistical analysis have become accepted techniques in historical scholarship. In order to reach valid conclusions and make valid inferences, it is absolutely necessary to adhere to the rules of statistics. Not only is it necessary to document carefully the individual steps of an inquiry for the sake of clarity, careful sample design is also of great moment. As the universes from which the samples are drawn are known, a cause for considerable uncertainty in many studies – particularly such using historical or otherwise archival records where it is frequently impossible to ascertain the universe precisely beforehand – is not present here.[363]

For this study, I drew my samples of the inventoried population in the various counties and districts to reflect an *acceptable error* of ± 5% and a *confidence level*

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[362] The entire data set upon which this study is based has been placed in the Data Archive for the Social Sciences in Cologne.

[363] On that problem see Jones, *American Colonial Wealth* III:1830 and above.

of 95%. As I had very little idea what occurrence of guns in inventories to expect, I decided to err on the side of caution and assume an equal distribution of 50% to 50%. That way, I drew the sample for the most difficult situation and will be on the safe side in any more favorable setting. With these parameters I used Stats, a software program specifically designed to make such statistical calculations, to calculate my own sample sizes. In cases where the *universe* was smaller than 30 cases, an important threshold in statistics, I did not draw samples but worked with all cases instead.[364] Also, I amalgamated all 1786/87 South Carolina inventories outside Charleston District into one backcountry category. Thus, I obtained the sample sizes shown in Appendix III.[365]

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[364] With fewer than 30 cases, analysis often becomes problematic, for example in contingency tables where very few cases would leave some fields with too few values to useful in interpretation.

[365] In five single cases (0.136% of all 3664 cases of the universe) errors in entering the year had occurred in the compilation of the universes, leading to incorrect universe counts in South Carolina 1735, South Carolina 1739, South Carolina 1743, Suffolk 1752 and Bristol 1779. In these cases (marked '!' in the table in Appendix III) the reliability of the samples is slightly smaller. Appendix III.

Composition of Universe Lenz

The universe for the present study consists of three files:
MS-Excel-File *Universe Dukes County Lenz* (243 entries)
MS-Excel-File *Universe Nantucket County Lenz* (185 entries)
MS-Access-Table *Inventories* in DB *Universe Lenz*

The universes for Dukes and Nantucket Counties were collected during a pre-test and were at that time *not* entered into the MS-Access database. Only later were the samples of Dukes and Nantucket Counties, drawn from the original Excel-sheets drawn into the Access-Table *Inventories*. That Table thus contains 3510 entries:

| | |
|---|---:|
| Universe Berkshire | 57 |
| Universe Bristol | 364 |
| Universe Essex | 865 |
| Universe Hampshire | 199 |
| Universe Suffolk | 862 |
| Universe South Carolina | 747 |
| Universe Charleston District | 104 |
| Universe SC Backcountry | 38 |
| *Sample* Dukes | 149 |
| *Sample* Nantucket | 125 |
| Table *Inventories* | 3510 |

The difference between this number and the entire universe of 3664 cases consists as follows:

| | |
|---|---:|
| Entire Universe | 3664 |
| Dukes County *not* sampled | -94 |
| Nantucket County *not* sampled | -60 |
| Table *Inventories* | 3510 |

## Appendix IV: Tables

N.B.: In collecting the data from the selected probate inventories, I have used the following variables with the following values. Because originally the dissertation was planned to be in German, the names of the variables are in German. See the Code Plan in Appendix III for explanation.

### Table 1: Universes and Sample Sizes

| | Berkshire | | Bristol | | Dukes | | Essex | | Hampshire | | Nantucket | | Suffolk | | South Carolina | | Charleston District | | SC Backcountry | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Universe | Sample | Universe | Sample | Universe | Sample | Universe | Sample | Universe | Sample | Universe | Sample | Universe | Sample | Universe | Sample | Universe | Sample | Universe | Sample | |
| 1735 | | | 24 | 24 | 243 | 149 | 33 | 31 | 12 | 12 | 185 | 125 | 51 | 45 | 53 | 45! | | | | | |
| 1739 | | | 23 | 23 | | | 65 | 56 | 16 | 16 | | | 51 | 45 | 70 | 59! | | | | | |
| 1740 | | | 39 | 36 | | | 56 | 49 | 5 | 5 | | | 61 | 52 | 9 | 9 | | | | | |
| 1743 | | | 24 | 24 | | | 38 | 35 | 15 | 15 | | | 62 | 54 | 89 | 72! | | | | | |
| 1752 | | | 42 | 38 | | | 84 | 69 | 9 | 9 | | | 161 | 113! | 127 | 95 | | | | | |
| 1759 | | | 45 | 41 | | | 131 | 98 | 39 | 36 | | | 99 | 79 | 106 | 83 | | | | | |
| 1765 | 3 | 3 | 36 | 33 | | | 126 | 95 | 9 | 9 | | | 81 | 67 | 89 | 73 | | | | | |
| 1771 | 5 | 5 | 31 | 29 | | | 121 | 93 | 14 | 14 | | | 95 | 77 | 192 | 129 | | | | | |
| 1779 | 22 | 22 | 53 | 46! | | | 115 | 89 | 41 | 38 | | | 105 | 83 | 12 (1780) | 12 | | | | | |
| 1786 | 27 | 27 | 47 | 42 | | | 96 | 77 | 39 | 36 | | | 96 | 77 | | | 104 | 82 | 38 (1786/87) | 38 | |
| Sum Universes | 57 | | 364 | | 243 | | 865 | | 199 | | 185 | | 862 | | 747 | | 104 | | 38 | | 3664 |
| Sum Samples | | 57 | | 336 | | 149 | | 692 | | 190 | | 125 | | 692 | | 577 | | 82 | | 38 | 2938 |