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Human Fertility in Russia Since the Nineteenth Century



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HUMAN FERTILITY IN RUSSIA
SINCE THE NINETEENTH CENTURY

This book is the fifth in a series on
the decline of fertility in Europe.
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Princeton University.

Human Fertility in Russia since the Nineteenth Century

ANSLEY J. COALE
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Contents

LIST OF TABLES	vii
LIST OF FIGURES	xi
LIST OF MAPS	xix
PREFACE	xxi
CHAPTER 1: INTRODUCTION	3
CHAPTER 2: THE EVOLUTION OF MARITAL FERTILITY IN EUROPEAN RUSSIA	15
CHAPTER 3: MARITAL FERTILITY IN CENTRAL ASIA AND THE TRANSCAUCASUS	85
CHAPTER 4: VARIATIONS IN I_m : THE PROPORTIONS MARRIED AMONG POTENTIALLY FERTILE WOMEN IN THE UNION REPUBLICS, 1897 TO 1970	122
CHAPTER 5: VARIATIONS IN NUPTIALITY AMONG THE PROVINCES OF EUROPEAN RUSSIA IN 1897	147
CHAPTER 6: SUMMARY OF FERTILITY CHANGE IN RUSSIA: THE MARCH OF THE ELLIPSES	179
APPENDIX A: ADJUSTMENTS AND ESTIMATES USED IN CALCULATING THE BASIC FERTILITY INDEXES	207
APPENDIX B: NOTES ON THE AGE DISTRIBUTION OF NATIONALITIES IN 1959 AND 1970	247
APPENDIX C: NOTES ON THE FERTILITY OF THE NONMARRIED POPULATION	251
APPENDIX D: DATA SOURCES FOR FERTILITY INDEXES	257
NOTES	261
REFERENCES	273
INDEX	279

List of Tables

CHAPTER 2

Table 2.1	Index of Marital Fertility (I_g) in European Russia, for Single Calendar Years, 1881-1970	16
Table 2.2	Indexes of Fertility in 1897 for the Rural, Urban, and Total Populations of the Provinces of European Russia, Pre-Revolutionary Boundaries	20
Table 2.3	Indexes of Fertility in 1926 for the Rural, Urban, and Total Populations of the Provinces of European Russia, Pre-Revolutionary Boundaries	22
Table 2.4	Indexes of Fertility in 1926 for the Rural, Urban, and Total Populations of the Provinces of European Russia, Boundaries of 1959	24
Table 2.5	Indexes of Fertility in 1940 for the Total Populations of the Provinces of European Russia, Boundaries of 1959	28
Table 2.6	Indexes of Fertility in 1959 for the Rural, Urban, and Total Populations of the Provinces of European Russia, Boundaries of 1959	30
Table 2.7	Indexes of Fertility in 1970 for the Rural, Urban, and Total Populations of the Provinces of European Russia, Boundaries of 1959	34
Table 2.8	Variables in Multiple Regression Analysis	64
Table 2.9	Summary of Multiple Regressions (Variables Listed in Table 2.8)	65
Table 2.10	Average Value of the Infant Mortality Rate (Deaths Under One per 1,000 Live Births) in the 50 Provinces of European Russia, the 28 Provinces Containing More than Two Percent Western Nationalities, and the Other 22	67
Table 2.11	Correlations of I_g with Infant Mortality Rate and Proportion Western, 47 Provinces of European Russia (Protestant Baltic Provinces Omitted)	74
Table 2.12	Correlation of Infant Mortality Rate and Proportion of Western Nationality in the Population, Provinces of Pre-Revolutionary European Russia	74
Table 2.13	Results of Multiple Correlation of Rural I_g and Selected Independent Variables With and Without Proportion Western (1926) and Proportion Eastern (1959)	83

LIST OF TABLES

CHAPTER 3

Table 3.1	Indexes of Fertility, for the Rural, Urban, and Total Population of the Union Republics of the Soviet Union, 1897, 1926, 1959, and 1970	86
Table 3.2	Selected Characteristics of Non-European Republics of the Soviet Union, 1970	94
Table 3.3	Natural Fertility ($n(a)$) and Typical Departure from Natural Fertility ($v(a)$)	95
Table 3.4	Median Values of m , the Index of the Degree of Departure from Natural Fertility, in the Republics of the USSR, 1959 and 1970	98
Table 3.5	Estimates of I_g for the Titular Nationality, and the European Population, in the Non-European Republics of the Soviet Union, 1970	103
Table 3.6	Proportion Married (I_m) and Marital Fertility (I_g), Three Asian Populations	110

CHAPTER 4

Table 4.1	Index of Proportion Married (I_m) in the Union Republics of the Soviet Union, 1897 to 1970	124
Table 4.2	Singulate Mean Age at First Marriage, and Proportion Ever-Married at Age 50 Among Females in the Rural Population of the Union Republics, Late 19th Century, and 1965-1970	136
Table 4.3	Singulate Mean Age at First Marriage, and Proportion Ever-Married at Age 50 Among Females in Various West European, East European, and Non-European Populations	137

CHAPTER 5

Table 5.1	The Four Most Important Independent Variables (with the Highest Partial Correlations) in the Multivariate Analysis of the Singulate Mean Age at Marriage, 50 Provinces of European Russia, and 50 Provinces Less Four Baltic Provinces, 1897	167
Table 5.2	Regression Coefficients and R^2 Values for SMAM (Male and Female) and I_m , Urban and Rural, 50 Provinces of European Russia, 1897	168
Table 5.3	Intercorrelations Among Independent Variables Used to Explain SMAM and I_m in 1897	169

LIST OF TABLES

APPENDIX A

Table A.1	Reapportionment of Persons from Single to Married in the Rural Population of Certain Uezds and Provinces, and Effect on Proportion Married, Census of Russia, 1897	222
Table A.2	Approximate Completeness of Birth Registration, 1954-58 and 1965-69, Republics of the Soviet Union	239

APPENDIX C

Table C.1	Indexes in 1897 for the Rural, Urban, and Total Populations of the Provinces of European Russia, Pre-Revolutionary Boundaries	252
Table C.2	Indexes in 1926 for the Rural, Urban, and Total Populations of the Provinces of European Russia, Pre-Revolutionary Boundaries	254

List of Figures

CHAPTER 1

Figure 1.1	Proportion Married (I_m), Marital Fertility (I_g), and Overall Fertility (I_f), Various European Populations: 1900	10
Figure 1.2	Proportion Married (I_m), Marital Fertility (I_g), and Overall Fertility (I_f), Various European Populations: 1930	11
Figure 1.3	Proportion Married (I_m), Marital Fertility (I_g), and Overall Fertility (I_f), Various European Populations: 1960	12
Figure 1.4	Proportion Married (I_m), Marital Fertility (I_g), and Overall Fertility (I_f), Various European Populations: 1970	13

CHAPTER 2

Figure 2.1	Annual Values of Marital Fertility (I_g), European Russia: 1881-1970	17
Figure 2.2	Marital Fertility (I_g) of Total Population, Distribution of Provinces of European Russia by Level: 1897-1970	38
Figure 2.3	Marital Fertility (I_g) of Rural Population, Distribution of Provinces of European Russia by Level: 1897-1970	39
Figure 2.4	Marital Fertility (I_g) of Urban Population, Distribution of Provinces of European Russia by Level: 1897-1970	40
Figure 2.5	Rural Marital Fertility (I_g) at Consecutive Census Dates, by Province of European Russia: 1897 vs. 1926, 1926 vs. 1940, 1940 vs. 1959, and 1959 vs. 1970	45
Figure 2.6	Urban Marital Fertility (I_g) at Consecutive Census Dates, by Province of European Russia: 1897 vs. 1926, 1926 vs. 1940, 1940 vs. 1959, and 1959 vs. 1970	46
Figure 2.7	Relation of Urban Marital Fertility (I_g) to Rural Marital Fertility (I_g), Provinces of European Russia: 1897-1970	48

LIST OF FIGURES

Figure 2.8	Relation of Marital Fertility (I_g) in Major Cities to Marital Fertility (I_g) in Remainder of Urban Areas, Provinces of European Russia: 1897	50
Figure 2.9	Relation of Rural I_g , 1926 and 1959, to Proportion of Population Consisting of Eastern or Western Nationalities	72
Figure 2.10	Relation of Marital Fertility (I_g) of Rural Russians to Marital Fertility (I_g) of Remainder of Rural Population, Provinces of European Russia: 1926	76
Figure 2.11	Relation of Marital Fertility (I_g) of Rural Ukrainians to Marital Fertility (I_g) of Remainder of Rural Population, Provinces of European Russia: 1926	77
Figure 2.12	Relation of Marital Fertility (I_g) of Urban Jews to Marital Fertility (I_g) of Remainder of Urban Population, Provinces of European Russia: 1926	78
Figure 2.13	Relation of Marital Fertility (I_g) of Urban Jews to Marital Fertility (I_g) of Remainder of Urban Population, Provinces of European Russia: 1897	79
Figure 2.14	Relation of Marital Fertility (I_g) of Rural Russians to Marital Fertility (I_g) of Rural Eastern Nationalities, European Russian ASSRs: 1970	82

CHAPTER 3

Figure 3.1	Rural Marital Fertility (I_g), European Republics: 1897-1970	90
Figure 3.2	Rural Marital Fertility (I_g), Non-European Republics: 1897-1970	91
Figure 3.3	Urban Marital Fertility (I_g), European Republics: 1897-1970	92
Figure 3.4	Urban Marital Fertility (I_g), Non-European Republics: 1897-1970	93
Figure 3.5	Measure of Fertility Control (m) for Sweden 1875-1960 and for Taiwan 1956-1972	96
Figure 3.6	Measure of Fertility Control (m) for each Five-Year Age Group, 25-29 to 45-49, by Republic: 1959-1970	99
Figure 3.7	Relation of Median Value of Measure of Fertility Control (m) to Marital Fertility (I_g), by Republic: 1959 and 1970	100

LIST OF FIGURES

Figure 3.8	Relation of Rural Marital Fertility (I_r) to Percentage of Population Consisting of Eastern Nationalities: 1959	102
CHAPTER 4		
Figure 4.1	Proportion Married (I_m), by Republic, Rural and Urban: 1897-1970	123
Figure 4.2a	Proportion Married by Age, by Republic, Rural Areas, European Republics: 1897-1970	126
Figure 4.2b	Proportion Married by Age, by Republic, Urban Areas, European Republics: 1897-1970 (continued)	127
Figure 4.2c	Proportion Married by Age, by Republic, Rural Areas, Non-European Republics: 1897-1970 (continued)	128
Figure 4.2d	Proportion Married by Age, by Republic, Urban Areas, Non-European Republics: 1897-1970 (continued)	129
Figure 4.3	Relation of Rural Proportion Married at Ages 40-49 to Rural Sex Ratio at Ages 35-54 (M/F), by Republic: 1959	133
Figure 4.4	Relation of Rural Proportion Married at Ages 30-39 in 1970 to the Natural Logarithm of Rural Proportion Single at Ages 30-39 in 1926, by Republic	134
Figure 4.5	Proportion Ever-Married at Age 50 and Average Age at Marriage (SMAM), Rural Populations of the Republics of Russia in the Late 19th Century and Selected West European, East European, and Non-European Populations	139
Figure 4.6	Relation of Index of Proportion Married (I_m) in 1970 to Index in 1897, Union Republics	144
CHAPTER 5		
Figure 5.1	Relation of Rural Proportion Married (I_m) to Region Numbered from Baltic, Provinces of European Russia: 1897	151
Figure 5.2	Relation of Urban Proportion Married (I_m) to Rural Proportion Married (I_m), Provinces of European Russia: 1897	155
Figure 5.3	Relation of Mean Age at Marriage 1871-1880 to Mean Age at Marriage 1898-1908, Provinces of European Russia	156

LIST OF FIGURES

Figure 5.4	Relation of Proportion Married (I_m) of Rural Russians to Proportion Married (I_m) of Remainder of Rural Population, Provinces of European Russia: 1897	160
Figure 5.5	Relation of Proportion Married (I_m) of Rural Ukrainians to Proportion Married (I_m) of Remainder of Rural Population, Provinces of European Russia: 1897	161
Figure 5.6	Relation of Proportion Married (I_m) of Rural Poles to Proportion Married (I_m) of Remainder of Rural Population, Provinces of European Russia: 1897	162
Figure 5.7	Relation of Proportion Married (I_m) of Rural Tatars to Proportion Married (I_m) of Remainder of Rural Population, Provinces of European Russia: 1897	164
Figure 5.8	Relation of Proportion Married (I_m) of Rural Jews to Proportion Married (I_m) of Remainder of Rural Population, Provinces of European Russia: 1897	165
Figure 5.9	Relation of Change in Mean Age at Marriage (1871-1880 to 1898-1908) to Change in Female Proportion Literate at Ages 20-29 (1877-1906)	176

CHAPTER 6

Figure 6.1	Proportion Married (I_m), Marital Fertility (I_g), and Overall Fertility (I_r), Rural Population, Provinces of European Russia: 1897	180
Figure 6.2	Proportion Married (I_m), Marital Fertility (I_g), and Overall Fertility (I_r), Rural Population, Provinces of European Russia: 1926	181
Figure 6.3	Proportion Married (I_m), Marital Fertility (I_g), and Overall Fertility (I_r), Rural Population, Provinces of European Russia: 1959	182
Figure 6.4	Proportion Married (I_m), Marital Fertility (I_g), and Overall Fertility (I_r), Rural Population, Provinces of European Russia: 1970	183
Figure 6.5	Proportion Married (I_m), Marital Fertility (I_g), and Overall Fertility (I_r), Urban Population, Provinces of European Russia: 1897	184
Figure 6.6	Proportion Married (I_m), Marital Fertility (I_g), and Overall Fertility (I_r), Urban Population, Provinces of European Russia: 1926	185

LIST OF FIGURES

Figure 6.7	Proportion Married (I_m), Marital Fertility (I_g), and Overall Fertility (I_f), Urban Population, Provinces of European Russia: 1959	186
Figure 6.8	Proportion Married (I_m), Marital Fertility (I_g), and Overall Fertility (I_f), Urban Population, Provinces of European Russia: 1970	187
Figure 6.9	Distribution of (I_m , I_g) Points, Rural Population, Provinces of European Russia, 1897, 1926, 1959, and 1970	188
Figure 6.10	Distribution of (I_m , I_g) Points, Urban Population, Provinces of European Russia, 1897, 1926, 1959, and 1970	189
Figure 6.11	Proportion Married (I_m), Marital Fertility (I_g), and Overall Fertility (I_f), Rural Population, Union Republics: 1897	190
Figure 6.12	Proportion Married (I_m), Marital Fertility (I_g), and Overall Fertility (I_f), Rural Population, Union Republics: 1926	191
Figure 6.13	Proportion Married (I_m), Marital Fertility (I_g), and Overall Fertility (I_f), Rural Population, Union Republics: 1959	192
Figure 6.14	Proportion Married (I_m), Marital Fertility (I_g), and Overall Fertility (I_f), Rural Population, Union Republics: 1970	193
Figure 6.15	Proportion Married (I_m), Marital Fertility (I_g), and Overall Fertility (I_f), Urban Population, Union Republics: 1897	194
Figure 6.16	Proportion Married (I_m), Marital Fertility (I_g), and Overall Fertility (I_f), Urban Population, Union Republics: 1926	195
Figure 6.17	Proportion Married (I_m), Marital Fertility (I_g), and Overall Fertility (I_f), Urban Population, Union Republics: 1959	196
Figure 6.18	Proportion Married (I_m), Marital Fertility (I_g), and Overall Fertility (I_f), Urban Population, Union Republics: 1970	197
Figure 6.19	Distribution of (I_m , I_g) Points, Rural Populations, Union Republics, 1897, 1926, 1959, and 1970	198
Figure 6.20	Distribution of (I_m , I_g) Points, Urban Populations, Union Republics, 1897, 1926, 1959, and 1970	199
Figure 6.21	Changes in (I_m , I_g) in the Rural Population, Individual European Republics, 1897-1970	200

LIST OF FIGURES

Figure 6.22	Changes in (I_m, I_g) in the Urban Population, Individual European Republics, 1897-1970	201
Figure 6.23	Changes in (I_m, I_g) in the Rural Population, Individual Non-European Republics, 1897-1970	202
Figure 6.24	Changes in (I_m, I_g) in the Urban Population, Individual Non-European Republics, 1897-1970	203

APPENDIX A

Figure A.1	Birth Rate Estimated from the Proportion Under Age Ten Compared with Birth Rate Calculated from Registered Births, Total Population by Province, 1897	208
Figure A.2	Birth Rate Estimated from the Proportion Under Age One Compared with Birth Rate Calculated from Registered Births, Total Population by Province, 1897	209
Figure A.3	Birth Rate Estimated from the Proportion Under Age One Compared with Birth Rate Calculated from Registered Births, Rural Population by Province, 1897	211
Figure A.4	Birth Rate Estimated from the Proportion Under Age One Compared with Birth Rate Calculated from Registered Births, Urban Population by Province, 1897	212
Figure A.5	Ratio of Registered Birth Rate to Estimated Birth Rate in the Rural Population, and the Corresponding Ratio in the Urban Population, by Province, 1897	214
Figure A.6	Urban Marital Fertility (I_g) and Rural Marital Fertility Calculated from Registered Births, by Province, 1897	215
Figure A.7	Urban Marital Fertility (I_g) and Rural Marital Fertility Calculated from Births Allocated According to Number of Children Under Age One, by Province, 1897	216
Figure A.8	Urban Marital Fertility (I_g) Calculated from Registered Births, by Province, 1897, and Urban Marital Fertility, by Province, 1926	217
Figure A.9	Urban Marital Fertility (I_g) Calculated from Births Allocated According to Number of Children Under Age One, by Province, 1897, and Urban Marital Fertility, by Province, 1926	218

LIST OF FIGURES

Figure A.10	Ratio of Urban Relative Completeness (<i>registered births</i>)/(<i>births estimated from number of children under age one</i>) to Rural Relative Completeness, and Ratio of Urban Marital Fertility (I_r) Calculated from Registered Births to Rural Marital Fertility Calculated from Registered Births, by Province, 1897	219
Figure A.11	Ratio of Urban Relative Completeness (<i>registered births</i>)/(<i>births estimated from number of children under age one</i>) to Rural Relative Completeness, and Ratio of Urban Marital Fertility (I_r) Calculated from Number of Children Under Age One to Rural Marital Fertility Calculated from Number of Children Under Age One, by Province, 1897	220
Figure A.12	Birth Rate Calculated from the Proportion Under Age Five and Birth Rate Calculated from Registered Births, by Province, RSFSR and Ukraine, 1926	229
Figure A.13	Birth Rate Estimated from the Proportion Under Age x ($b(x)$), Georgia and Uzbek SSR, 1926	243
Figure A.14	Birth Rate Estimated from the Proportion Under Age x ($b(x)$), Georgia and Uzbek SSR, 1897	245

APPENDIX B

Figure B.1	Survival Ratios from 1959 to 1970 (Divided by Median Ratio for Five European Nationalities) for Various Nationalities of the Soviet Union	249
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List of Maps

CHAPTER 2

Map 2.1	Rural Marital Fertility (I_g), Provinces of European Russia: 1897	54
Map 2.2	Rural Marital Fertility (I_g), Provinces of European Russia: 1926	55
Map 2.3	Rural Marital Fertility (I_g), Provinces of European Russia: 1940	56
Map 2.4	Rural Marital Fertility (I_g), Provinces of European Russia: 1959	57
Map 2.5	Rural Marital Fertility (I_g), Provinces of European Russia: 1970	58
Map 2.6	Urban Marital Fertility (I_g), Provinces of European Russia: 1897	59
Map 2.7	Urban Marital Fertility (I_g), Provinces of European Russia: 1926	60
Map 2.8	Urban Marital Fertility (I_g), Provinces of European Russia: 1959	61
Map 2.9	Urban Marital Fertility (I_g), Provinces of European Russia: 1970	62
Map 2.10	Proportion of Eastern and Western Nationalities in Population, Provinces of European Russia: 1897	69
Map 2.11	Proportion of Eastern and Western Nationalities in Population, Provinces of European Russia: 1959	70

CHAPTER 5

Map 5.1	Rural Proportion Married (I_m), Provinces of European Russia: 1897	149
Map 5.2	Urban Proportion Married (I_m), Provinces of European Russia: 1897	150
Map 5.3	Rural Average Age at Marriage (SMAM), Provinces of Russia: 1897	152
Map 5.4	Urban Average Age at Marriage (SMAM), Provinces of Russia: 1897	153
Map 5.5	Average Population per Village, Provinces of European Russia: 1897	170
Map 5.6	Proportion Literate among Rural Females Aged 20-29: 1897	171

LIST OF MAPS

- Map 5.7 Urban Sex Ratio (M/F) at Ages 40-49 minus
Total Sex Ratio (M/F) at Ages 40-49, Prov-
inces of European Russia: 1897 172

APPENDIX A

- Map A.1 Kiev Guberniia as of 1897, with the Areas for
which 1926 Data Were Combined to Represent
Guberniia in 1926 226

Preface

In 1963 a plan was formulated at the Office of Population Research at Princeton University to document the decline in the rate of childbearing in Europe, province by province. In nearly every one of the more than seven hundred European provinces women today are bearing no more than half the number of children born a few generations earlier; however, the timing and the pace of this nearly universal decline in fertility differs widely from area to area. The principal purpose of the European Fertility Project is a better understanding of the circumstances that have contributed to a lower rate of childbearing, circumstances that may be of considerable interest for rapidly growing populations today. An incidental purpose is to record and analyze a significant feature of the recent social history of every European population.

The project has taken the form of a series of country studies carried out at Princeton and by colleagues at other American universities and in Europe. The studies utilize the same set of fertility measures, and each aims to cover the period from the beginning of the modern decline to its end, or in some instances, to the present. This is the sixth book to present results of research on the fertility of particular European populations. The first five—*A Century of Portuguese Fertility* and *A History of Italian Fertility during the Last Two Centuries* by Massimo Livi-Bacci, *The Decline of Fertility in Germany, 1871-1939* by John Knodel, *The Decline of Belgian Fertility, 1800-1970* by Ron J. Lesthaeghe, and *The Female Population of France in the Nineteenth Century* by Etienne van de Walle—have dealt with geographic subdivisions within countries in Southern or Western Europe. Other studies of Great Britain, Switzerland, Scandinavia, and a second volume on France are in process. In addition to books and articles on national populations, a conference is planned (in 1979) at which there will be a summary presentation of province-by-province statistics for all of Europe and a series of papers dealing with particular features of European fertility history, such as rural-urban differences, the geographical clustering of fertility patterns, and the relations to education and infant mortality.

This study of the decline in the rate of childbearing among the popu-

PREFACE

lations that now constitute the Soviet Union deals in greatest detail with Europeans, but it also extends into Asia to encompass peoples who at the time of the 1917 Revolution had ways of life and demographic characteristics that were non-European. As the reader will see, this diversity of the Soviet population has had a strong continuing effect on trends in fertility.

A special statement about the statistical data employed in this study is required. A large mass of basic statistics has been assembled over a period of some thirteen years, primarily by Erna Härm. Intensive adjustments and estimates have been made because of gaps and defects in what has been recorded and published. The statistical material most directly related to our conclusions is presented in the maps, figures, and tables in this volume. The sources from which the basic fertility indexes were calculated are listed in Appendix D; the methods of adjustment and estimation employed are described in Appendix A; and supplementary data on fertility of the unmarried are presented in Appendix C. This material, extensive though it may appear, is only a small tip of a large iceberg. The computer printouts that we have accumulated would make a pile at least thirty feet high, and we also have many folders of xeroxed or photostated tables. The primary data and basic adjustments that existed in machine-readable form and that are most likely to be useful have been stored on magnetic tape at the Princeton University Computer Center. A catalog listing the contents of the material on tape appears in the April 1979 issue of *Population Index*, together with information about how a copy of the tape may be obtained.

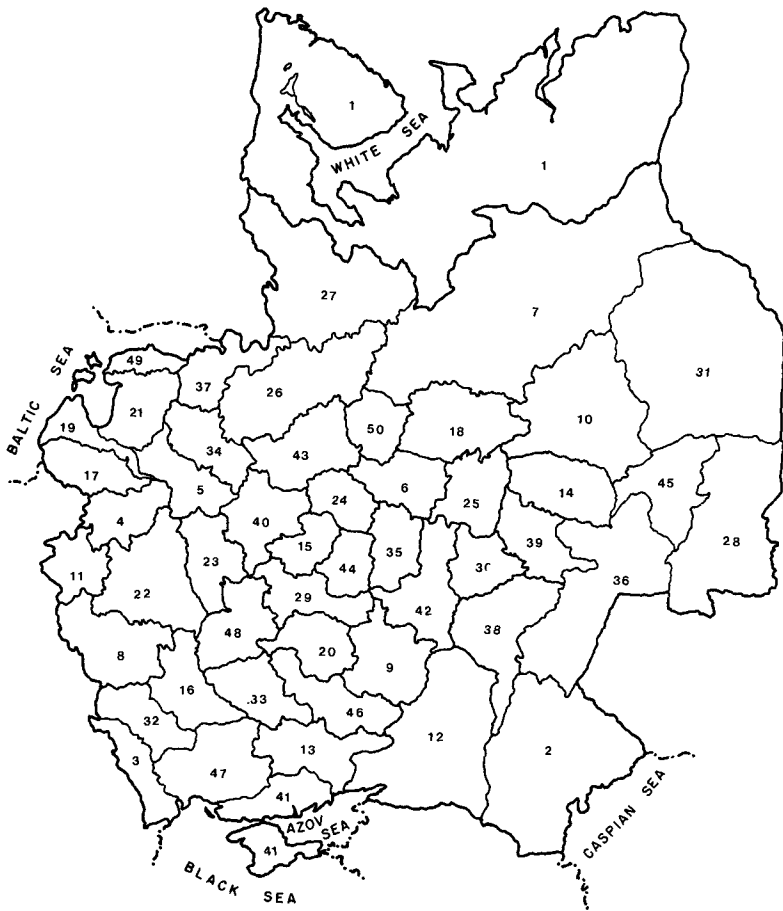
Advice and help in diverse forms for this research has come from many sources. Warren Eason made a particularly valuable contribution by insisting that the non-European populations could not be omitted from the study. For several years he has exchanged data and ideas with the Office of Population Research as he has pursued somewhat parallel research interests. Michael Stoto and T. James Trussell devised the programs for calculating the ellipses that help to summarize the changing distribution of fertility; Donald McNeil also gave valuable technical advice. Helena Choynacka contributed useful ideas about the cause of differences in age at marriage in Russia and also made available data that she had assembled. Daniel Baumol and John Chow contributed extensive statistical calculations and other skilled research assistance.

PREFACE

Etienne van de Walle, Massimo Livi-Bacci, John Knodel, and Ron Lesthaeghe, the authors of the earlier books in the series, provided helpful models for our analysis and useful ideas and comments at various stages. Andrejs Plakans generously supplied unpublished data from his own research. Plakans, Trussell, Bryan Boulier, Jane Menken, D. Peter Mazur, and Gilbert Rozman suggested corrections of fact, wording, or statistical procedure after reading the manuscript. Noreen Goldman and Hannah Kaufman helped to make final corrections in calculations and statistical analysis. Richard Boscarino prepared the figures and maps. Anne Ryder typed most of the manuscript, cheerfully persisting through several drafts of most chapters and often working from notoriously illegible handwriting.

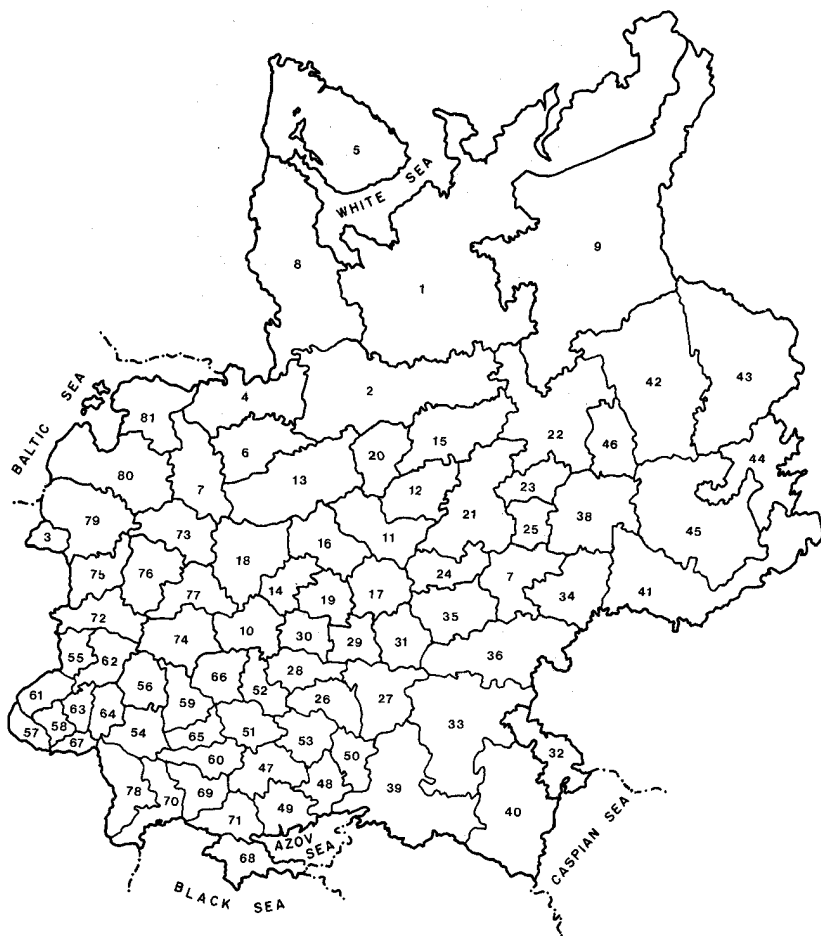
The European Fertility Project was initiated with the help of a modest grant from the Population Council that enabled Coale, while on leave in Italy in 1963, to visit several Eastern European capitals in search of data and possible cooperation on the prospective project; by support from the Rockefeller Foundation in 1964 for an exploratory phase; by a two-year grant from the National Science Foundation; by six and a half years of support from the National Institute of Child Health and Human Development; and by a grant from the Rockefeller Foundation to fund the last stages of the project. None but the authors is responsible for the defects and errors that remain in this book.

Ansley J. Coale
Barbara A. Anderson
Erna Härm



Provinces of European Russia, 1897

- | | | | |
|-------------------|---------------------|--------------------|---------------|
| 1. Archangel | 14. Kazan | 27. Olonets | 40. Smolensk |
| 2. Astrakhan | 15. Kaluga | 28. Orenburg | 41. Tavrida |
| 3. Bessarabia | 16. Kiev | 29. Orel | 42. Tambov |
| 4. Vilna | 17. Kovno | 30. Penza | 43. Tver |
| 5. Vitebsk | 18. Kostroma | 31. Perm | 44. Tula |
| 6. Vladimir | 19. Kurland | 32. Podolsk | 45. Ufa |
| 7. Vologda | 20. Kursk | 33. Poltava | 46. Kharkov |
| 8. Volhynia | 21. Livonia | 34. Pskov | 47. Kherson |
| 9. Voronezh | 22. Minsk | 35. Ryazan | 48. Chernigov |
| 10. Vyatka | 23. Mogilev | 36. Samara | 49. Estonia |
| 11. Grodno | 24. Moscow | 37. St. Petersburg | 50. Yaroslavl |
| 12. Don | 25. Nizhni Novgorod | 38. Saratov | |
| 13. Ekaterinoslav | 26. Novgorod | 39. Simbirsk | |



Provinces of European Russia, 1959

- | | | | |
|------------------|-------------------|----------------------|-------------------|
| 1. Archangel | 21. Gorkii | 41. Orenburg | 61. Lvov |
| 2. Vologda | 22. Kirov | 42. Perm | 62. Rovensk |
| 3. Kaliningrad | 23. Mari ASSR | 43. Sverdlov | 63. Ternopol |
| 4. Leningrad | 24. Mordvian ASSR | 44. Cheliabinsk | 64. Khmel'nitskii |
| 5. Murmansk | 25. Chuvash ASSR | 45. Bashkir ASSR | 65. Cherkassy |
| 6. Novgorod | 26. Belgorod | 46. Udmurt ASSR | 66. Chernigov |
| 7. Pskov | 27. Voronezh | 47. Dnepropetrovsk | 67. Chernovits |
| 8. Karelian ASSR | 28. Kursk | 48. Donets | 68. Crimean |
| 9. Komi ASSR | 29. Lipetsk | 49. Zaporozhie | 69. Nikolaev |
| 10. Briansk | 30. Orel | 50. Lugansk | 70. Odessa |
| 11. Vladimir | 31. Tambov | 51. Poltava | 71. Kherson |
| 12. Ivanov | 32. Astrakhan | 52. Sumy | 72. Brest |
| 13. Kalinin | 33. Volgograd | 53. Kharkov | 73. Vitebsk |
| 14. Kaluga | 34. Kuibishev | 54. Vinnitsa | 74. Gomel |
| 15. Kostroma | 35. Penza | 55. Volhynia | 75. Grodno |
| 16. Moscow | 36. Saratov | 56. Zhitomir | 76. Minsk |
| 17. Ryazan | 37. Ulianov | 57. Trans Carpathian | 77. Mogilev |
| 18. Smolensk | 38. Tatar ASSR | 58. Ivan Franko | 78. Moldavia |
| 19. Tula | 39. Rostov | 59. Kiev | 79. Lithuania |
| 20. Yaroslavl | 40. Kalmyk ASSR | 60. Kirov | 80. Latvia |
| | | | 81. Estonia |

HUMAN FERTILITY IN RUSSIA
SINCE THE NINETEENTH CENTURY

CHAPTER 1: Introduction

In the last two centuries, two widely occurring basic changes in the dynamics of population have profoundly modified the lifetime experience of individuals and the structure of the societies in which they live: a dramatic increase in the average duration of life; and a dramatic decrease in the average number of children women bear by the end of their potentially fertile years. The mean length of life has increased as the risk of dying has been reduced at every age because of increases in real income and improvements in preventive and curative medicine; the number of children born has declined as married couples have been successful in deliberate efforts to restrict childbearing. The decline in mortality has in many instances doubled the mean duration of life, and the decline in fertility has frequently reduced by one-half the number of children women bear.

The decrease in mortality began in Western Europe in the late eighteenth century with rather modest declines in death rates, and it has continued up to the present. Once death rates began to fall in Latin America, Asia, and Africa (much later, often only within the past few decades), the reductions were frequently very large. The fall in death rates has by now become so general that it has been shared by every national population in the world. The decrease in fertility—the sustained modern decline that is associated with the spread of voluntary birth control—became evident on a national scale in France by the beginning of the nineteenth century, and perhaps began at about the same time in the United States.¹ In Western European countries other than France, the decline began in the second half of the nineteenth century. It began later in Southern and Eastern Europe—in Albania, as late as the post-World War II period. Before 1910, large decreases in fertility had been initiated in most overseas areas populated by Europeans, including (in addition to the United States) Canada, Argentina, Australia, and New Zealand. A very large fall has also occurred in Japan, although the date of its beginning is hard to determine from the available records.

The decline in fertility has been a universal feature of the recent history of all countries that are usually accepted as the most highly developed, that is, those characterized by a fully modern organization of society and economic life. Fertility has also begun to fall, usually at a faster rate than was experienced by European populations, in many

INTRODUCTION

countries that are not so highly modernized. Unlike the decline in mortality, however, a reduction in fertility has not yet started in all national populations. Little or no change is evident in some populations in Asia (none in Bangladesh, parts of India, and Afghanistan, for example), in Africa (for example, no change in virtually all of tropical Africa, nor in parts of north Africa), nor in Latin America (little change, for example, in Bolivia, Peru, and, until very recently at least, Mexico).

Lower mortality has an obvious implication of great importance to the individual: longer life itself. Lower death rates also mean that siblings and friends survive rather than die at an early age. With present-day low mortality rates, a child usually reaches his adult years without experiencing the death of a brother, sister, or close friend, and frequently with both parents still alive—all outcomes of childhood life that would have been exceptional a few generations back. Parents now rarely lose children, and the early disruption of marriage by death of a spouse has become uncommon. The forces that have reduced mortality have also brought reductions in chronic fever and other debilitating or painful consequences of infectious disease. To the individual child, lower fertility means that he grows up in the company of fewer siblings. When low fertility is combined with low mortality, children more frequently have living parents and grandparents, but young adults have fewer children, and older adults fewer grandchildren.

Reduced fertility and mortality affect society as a whole, first of all by *increasing the rate of growth and altering the age structure of the population*. The decline in mortality, which often precedes the fall in fertility, has caused a truly exceptional increase in global population. In 170 years the population of the world has increased from 1 billion to 4 billion; under the most favorable combinations of fertility and mortality of earlier eras the global population would not have doubled in this interval. The greatest acceleration of growth has been in the recent experience of the less developed countries, where mortality has dropped very sharply and fertility has not yet fallen. Mexico's population has doubled from 30 to 60 million in just 20 years.

The greatest alteration in age distribution resulting from these changes in vital rates is a shift to an older population, caused by the decline in fertility; indeed, the reduction in mortality alone, concentrated as it is at the younger ages, makes a population younger. This com-

INTRODUCTION

positional change has reduced the fraction of children (for example, in the United States the proportion under 15 has fallen from 49.8 percent in 1800 to 28.5 percent), increased the median age (from 16 to 28 years in the United States) and caused a rise in the proportion that is aged (the proportion over 65 has risen from less than 2 percent to nearly 10 percent). The social effects of altered age composition extend from changes in the burden of dependency to the subtler differences in atmosphere that distinguish an old population from a young one. In Mexico City or Bangkok, it is the children who are numerically predominant; in Vienna or Stockholm, it is the aged. This feature, as well as differences in language, climate, and appearance of buildings, creates a difference in tone that is quite evident to the visitor.

There has been much speculation about the causes of the reductions in the birth and death rates. The best known set of ideas is the theory of the demographic transition (sometimes called the vital revolution), which finds a persuasive association between the reduction of mortality and fertility and the altered social and economic conditions that are a natural part of the change to modern technology and industrial organization. Many of the ideas that constitute the theory of the demographic transition were developed by European social scientists before World War I and were fully elaborated in Europe and America in the 1930s, 1940s, and 1950s. The demographic transition is invoked in simplified form today to support various positions in politicized debates concerning the best strategy for moderating very high fertility in the less developed countries. "Development is the best contraceptive"—obviously a distillation of the theory—was one of the popular slogans at the World Population Conference in Bucharest in 1974.

The demographic transition is an interpretation of trends in fertility and mortality in a few European countries that had conveniently available data. This interpretation is buttressed by detailed information about particular subpopulations, such as patients at birth control clinics and respondents in select surveys. In 1962, at Princeton University, John Knodel and Nathaniel Iskandar collaborated in studying the decline in fertility, at the national level, in a number of European countries. They made the surprising discovery that the decline in marital fertility in Hungary began at about the same time, and proceeded at about the same pace, as in England and Wales. In Hungary in 1880 the population was still predominantly rural, deaths of children under