

Table of Contents

1 The Demographic and Epidemiological Context.....	1
1.1 Cohort Studies	7
1.2 Ecological Studies and Place of Birth.....	10
1.3 The Fetal Origins Hypothesis of Adult Diseases.....	13
1.4 Life-Course Factors	15
1.5 Month of Birth	16
2 Month-of-Birth Patterns in the Northern and Southern Hemisphere	19
2.1 Life Span by Season of Birth.....	22
2.2 A Different Approach	30
2.3 Bias in the Month-of-Birth Pattern	31
3 Five Hypothesis.....	37
3.1 Seasonal Distribution of Deaths	37
3.1.1 A Descriptive Approach Based on Death Rates.....	39
3.1.2 An Event-History Model to Separate the Effect of Month of Birth, Age, and Current Month	43
3.1.3 A Model Based on Death Rates to Separate the Effect of Month of Birth, Age, and Current Month	46
3.2 The Procreational Habits Hypothesis	49
3.3 The Deadline Hypothesis.....	51
3.4 Selective Survival or Debilitation.....	53
3.5 Conclusion	57
4 Differences in Life Span by Month of Birth in the United States	61
4.1 Data.....	65
4.2 Methods	67
4.3 Results.....	69
4.4 Conclusion	76

5 Month of Birth and Causes of Death in the United States.....	81
5.1 Malignant Neoplasms.....	82
5.2 Diseases of the Circulatory System	86
5.3 Diseases of the Respiratory System and Infectious Diseases	88
5.4 Non-Natural Causes of Death.....	92
5.5 Diseases of the Nervous System and Psychiatric Disorders	93
5.6 Conclusion	95
6 Cohort and Age Effects	105
6.1 Method and Data.....	107
6.2 Results	111
6.2.1 Comparison of the Month-of-Birth Pattern in the Danish Register Data and the Danish Twin Data.....	111
6.2.2 Age-Specific Mortality at Ages 50+ in the Danish Register Data	112
6.2.3 Age-Specific Mortality at Ages 20+ in the Danish Twin Data..	116
6.2.4 US Census Data	119
6.3 Discussion and Conclusion.....	121
7 The Month-of-Birth Patterns of Migrants and Farmers	125
7.1 Data and Method.....	126
7.1.1 Migrants.....	126
7.1.2 Farmers, Non-Farmers and Farm Workers	127
7.2 Results	129
7.2.1 British Migration to Australia.....	129
7.2.2 Internal US Migration	132
7.2.3 The Month-of-Birth Patterns of Farmers, Non-Farmers, and Farm Workers	137
7.3 Conclusion	138
8 Does the Month-of-Birth Effect Exist in Cohorts Born Today?....	141
8.1 Introduction.....	141
8.1.1 Birth Weight	143
8.1.2 Current Weight	144
8.1.3 Length at Birth and Height Gain During the First Year of Life.	146
8.1.4 Current Height	146
8.2 Data and Method	147
8.3 Results	151
8.4 Conclusion	159

9 Summary	167
9.1 Early-Life Circumstances and Adult Mortality	167
9.2 How to Study the Effect of the Month of Birth on the Life Span? ...	170
9.3 The Month-of-Birth Effect Depends on the Season	172
9.4 The Month-of-Birth Pattern of Migrants.....	174
9.5 Alternative Hypotheses for the Month-of-Birth Effect.....	176
9.6 The Causal Mechanisms.....	178
9.7 Does the Month-of-Birth Effect Exist in Cohorts Born Today?	181
9.8 Summary of Accomplishments and Outlook	184
References	187

