ICPSR Summer Program Workshop
Longitudinal Analysis of Historical Demographic Data
July 20 – August 14, 2009

We meet Monday through Friday from 9:00 am to 5:00 pm in G150B, Perry Building, 330 Packard, Ann Arbor. The room will be available for lab use in the evenings.

All readings are required unless marked “Recommended.” The texts for the course will be handed out on the first day of the workshop. Required readings not in the texts will be handed out in course packets. Many required and recommended readings can also be found on the CTools website (https://ctools.umich.edu/portal). Exercises and instructions about Projects will be posted to the website. Participants will work on Projects and share their results in the final day of the Workshop.

(This Syllabus may be revised during the course of the Workshop.)

Week 1

Monday (7/20):

*ORIENTATION*

Deane: Life Tables. The Life-Table Method; Life Tables from Grouped Data

Gutmann: Family Reconstitution: Person Years & Rates

Leonard: Introduction to the Lab and STATA

*OPENING RECEPTION 5:00 PM-7:00 PM
Perry Atrium

Tuesday (7/21):

Gutmann: The Life Table and Its Analogs
Deane: Using *stset* and Estimating Survival Curves: The Kaplan-Meir Method; Testing for Differences in Survivor Functions

Leonard: Compute Person-Years and Rates: Creating Life Tables using Brute Force

Wednesday (7/22):

Gutmann: From Family Reconstitution to Population Registers: Various Kinds of Longitudinal Data

Deane: Event History Analysis: What is EHA/Survival Analysis?; What is Survival Data?; Why Use EHA?; Approaches to EHA; Basic Concepts of EHA; Censoring

Leonard: Build a Mortality Life Table

Thursday (7/23):

Gutmann: Introduction to the Data Used in the Course: German Villages, French Parishes, Sart (a Belgian Commune), and the Utah Historical Database

Leonard: Exercise: Mortality Life Tables using STATA
Deane: Analysis of Discrete Data:
- Cleves, Gould and Gutierrez, 2004, Chapters 2, 3 and 5

Leonard: ST functions & Kaplan-Meier curves
- Exercise: Birth Interval Life Tables

Friday (7/24):
Gutmann: Censoring and Informative Censoring.

Deane: Event History Analysis
- Cleves, Gould and Gutierrez 2004, Chapter 7

Leonard: Experiments with Informative censoring
- Exercise: Simulating the effect of migration on family reconstitution data

*Saturday: SUMMER PROGRAM PICNIC AT BURNS PARK*

Week 2

Monday (7/27):
Lynch: Understanding Malthus

Deane: Estimating Cox Regression Models: The Proportional Hazards Model; Partial Likelihood; Tied Data; Time-Dependent Covariates
- Cleves, Gould and Gutierrez 2004, Chapter 9

Alter: A Strategy for Building Episode Files; Basics of Microsoft Access
- Exercise: Define tables, enter data, simple queries

Tuesday (7/28):
Longitudinal Analysis of Historical Demography Data

**Lynch: Thinking about “Preventive Checks” in Social Context**


**Deane: Cox Models with Nonproportional Hazards: Interaction with Time as Time-Dependent Covariates; Nonproportionality via Stratification; Left Truncation and Late Entry into the Risk Set**

- Cleves, Gould and Gutierrez 2004, Chapter 10

**Alter: Simple Queries**

- Exercise: Occupation code dictionary

**Wednesday (7/29):**

**Lynch: Re-thinking Checks on Population: Fertility and Mortality Patterns within Marriage**


**Deane: Residuals and Influence Statistics**

- Cleves, Gould and Gutierrez 2004, Chapter 11

*Lunchtime Talk: Satomi Kurosu*

*Perry 1300 A&B*  
*Lunch Provided*

**Alter: The Relational Model**

- Exercise: Reconstructing Kinship
Thursday (7/30):

Lynch: Household Forms and Family Formation Systems

Alexander, 2006, pp. 39-82

*KUROSU RECEPTION*
*5:00 PM-7:00 PM*
*Perry Atrium*

Thursday (7/30):

Lynch: Household Forms and Family Formation Systems


Deane: Testing Linear Hypotheses

Alter: Working with Data in MS-Access: Text, Dates

Exercise: Matching people on partial names and approximate dates

Friday (7/31):

Lynch: Families and Households as Systems of Social Support


Recommended: Daniel Scott Smith, “Accounting for Change in the Families of the Elderly in the United States, 1900-present,” in David van Tassel and Peter N. Stearns eds., Old age in a Bureaucratic Society: The Elderly, the Experts, and

Deane: Analysis of Discrete Data: The Logit Model for Discrete Time; The Complementary Log-Log Model for Continuous-time Processes; Data with Time-Dependent Covariates

Alter: Understanding SQL: Working with Nulls
Exercise: Finding Children without mothers
Alexander 2006, pp. 155-167

*Friday Evening*
Minor League Baseball Game
Lansing Lugnuts
Go NUTS!

Week 3

Monday (8/3):

Campbell: Issues and Debates in Asian Historical Demography

Smith: Re-cap Essentials of Cox models with UPDB: Competing risks and Cox Models; Multiple potential exits per subject; Identification problem; Independence assumption; Use of covariates

Alter: Moving from Events to Episodes
Exercise: Marital Status over Time

Tuesday (8/4):

Campbell: Sources in Asian Historical Demography

**Smith: Multiple events and Cox Models: Sequential events; Multiple events in a group; Marginal models; What is the right clock?**

*Lunchtime Talk: Sam Clark*
*Perry 230 A&B*
*Lunch Provided*

Alter: Aggregation
Exercise: Count older siblings by sex
Alexander 2006, pp. 241-255

**Wednesday (8/5):**

**Campbell: Reproduction in Asian Societies**

**Smith: Parametric Models: Alternatives to the Cox Model; Common models**
Cleves, Gould and Gutierrez 2004, Chapters 12 and 13

Alter: Coordinating episodes within households
Exercise: Household composition over time

*CLARK RECEPTION*
5:00 PM-7:00 PM
Perry Atrium

**Thursday (8/6):**

**Campbell: Health and Mortality in Asian Societies**

**Smith: Parametric Models (Continued): Alternatives to the Cox Model; Common models**

Alter: “Time since x” variables
Exercise: Survival of the preceding child

**Friday (8/7):**

**Campbell: Family and Household in Asian Societies**
Campbell, Cameron and James Lee. 2008 “Kinship, Employment and Marriage: The Importance of Kin Networks for Young Adult Males in Qing Liaoning.” Social Science History. 32(2):175-214.


Smith: Plotting fully-adjusted survival curves; Variance adjustments for clustered data; Regression Diagnostics

Cleves, Gould and Gutierrez 2004, Chapters 9 and 14


Richard M Cawthon; Ken R Smith; Elizabeth O'Brien; Anna Sivatchenko; Richard A. Kerber. “Association between telomere length in blood and mortality in people aged 60 years or older.” The Lancet; Feb 1, 2003; 361, 9355, pp. 393-395.

Cleves, Gould and Gutierrez 2004, Chapters 12 and 13

Alter: Forms and Reports

Alexander 2006, pp. 275-304

Quaranta: Poster Tutorial

*Saturday*

Afternoon: SUMMER PROGRAM PICNIC AT BURNS PARK

Week 4

Monday (8/10):

Hacker: Classic Demographic Transition Theory and Recent Critiques


Smith: Frailty: Individual; Group/shared; Correlated; Alternatives

Cleves, Gould and Gutierrez 2004, pp.147-152 and 278-299


**Alter: Intermediate Data Structure**


**Tuesday (8/11):**

**Hacker: The Mortality and Epidemiological Transitions**


**Smith: Discrete-time Event-history Analysis**


**Alter: Introduction to Visual Basic in Forms**

Exercise: A simple record linkage form

**Wednesday (8/12):**

**Hacker: Fertility Measurement and Natural Fertility**


**Smith: Discrete-time Event-history Analysis (continued)**
Longitudinal Analysis of Historical Demography Data

*Lunchtime Talk: Bertrand Desjardins*
*Lunch Provided*
*1300 Perry A&B*

Alter: Lab – Student Projects

**Thursday (8/13):**

**Hacker: The Fertility Transition**


**Smith: Interactions: Centering; Interpretations; Complexities of Non-proportionality**

Alter: Lab – Student Projects

**Friday (8/14):**

Student Reports
Poster Session