

**ICPSR Special Summer Program Workshop**  
**Longitudinal Analysis of Historical Demographic Data**  
**July 23 – August 17, 2007**

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. 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**

**Day 1 (7/23):**

**\*ORIENTATION\***

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

📖 Mario A. Cleves, William W. Gould, and Roberto G. Gutierrez. *Intro to Survival Analysis Using Stata, Revised Edition*. College Station, TX: Stata Press, 2004, Chapter 8.

**Gutmann: Family Reconstitution: Person Years & Rates**

📖 George Alter. *Family and the Female Life Course: The Women of Verviers, Belgium, 1849-1880*. University of Wisconsin Press, 1988, pp. 13-15, 25-62.

📖 E.A. Wrigley. “Family Reconstitution.” In E.A. Wrigley, ed. *An Introduction to English Historical Demography*, 1966, pp. 143-153.

📖 Recommended: E.A. Wrigley. 1966, pp 96-159

**Leonard: Introduction to the Lab and STATA**

**\*OPENING RECEPTION 5:00 PM-7:00 PM**

**Michigan Union, Room D, Anderson Room**

**Day 2 (7/24):**

**Gutmann: The Life Table and Its Analogs**

📖 James Palmore and Robert W. Gardner. *Measuring Mortality, Fertility and Natural Increase*. Honolulu: East-West Center, 1994, pp. 1-33.

📖 Alter, 1988, pp. 163-195.

**Deane: Using *stset* and Estimating Survival Curves: The Kaplan-Meier Method; Testing for Differences in Survivor Functions**


 Cleves, Gould and Gutierrez, 2004, Chapter 8, Chapter 6

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

⓪Exercise: Mortality Life Tables

**Day 3 (7/25):**

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

 Cameron Campbell, "Appendix: Sources and Measures." In Tommy Bengtsson, Cameron Campbell, and James Z. Lee, et al. *Life under Pressure: Mortality and Living Standards in Europe and Asia, 1700-1900*. Cambridge, MA: MIT Press, 2004, pp. 441-476.

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


 Cleves, Gould and Gutierrez, 2004, Chapters 1 and 4


**Leonard: Build a Mortality Life Table**


⓪Exercise: Mortality Life Tables using STATA

**Day 4 (7/26):**

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

 John E. Knodel, *Demographic Behavior in the Past: A Study of Fourteen German Village Populations*. Cambridge: Cambridge University Press, 1988, pp.3-32.

 Geraldine P. Mineau, Ken R. Smith and Lee L. Bean, "Research on the Historical Demography of Families and Health," Chapter 18 in *Handbook of Families & Health Interdisciplinary Perspectives*, D. Russell Crane and Elaine S. Marshall, eds. Sage Publications: Thousand Oaks, 2005, pp. 316-333, especially pp. 316-31.

 Myron P. Gutmann and Etienne van de Walle, "New Sources for Social and Demographic History: The Belgian Population Registers." *Social Science History*, Vol. 2, No. 2. (Winter, 1978), pp. 121-143.

**Deane: Analysis of Discrete Data:**

 Cleves, Gould and Gutierrez, 2004, Chapters 2, 3 and 5

**Leonard: ST functions & Kaplan-Meier curves**

⓪Exercise: Birth Interval Life Tables

**Day 5 (7/27):**

**Gutmann: Censoring and Informative Censoring.**

- 📖 Andrew Pollack and Reed Abelson. “Why the Data Diverge on the Dangers of Vioxx.” *New York Times*, May 22, 2006.
- 📖 M.P. Gutmann and G. Alter. “Family Reconstitution as Event History Analysis”, in *Old and New Methods in Historical Demography*, David S. Reher and Roger Schofield, eds., Clarendon Press, 1993, pp. 163-166.
- 📖 Susan C. Watkins and M. P. Gutmann. “Methodological Issues in the Use of Population Registers for Fertility Analysis.” *Historical Methods* 16 (1983):109-120.

**Deane: Event History Analysis**

- 📖 Cleves, Gould and Gutierrez 2004, Chapter 7

**Leonard: Experiments with Informative censoring**

- ④Exercise: Simulating the effect of migration on family reconstitution data

**\*Saturday: SUMMER PROGRAM PICNIC AT BURNS PARK\***

**Week 2**

**Day 1 (7/30):**

**Lynch: Understanding Malthus**

- 📖 Thomas R. Malthus, *An Essay on the Principle of Population*. 1st ed., 1798, Chapters 1-6.
- 📖 Recommended: Malthus *An Essay...* 1<sup>st</sup> ed, 1798, Chapters 7-19  
<http://www.esp.org/books/malthus/population/malthus.pdf>.
- 📖 Recommended: Malthus. *An Essay...* 6<sup>th</sup> edition, 1826.  
<http://www.econlib.org/library/malthus/malPlong.html>.

**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**

- ④Exercise: Define tables, enter data, simple queries
- 📖 George Alter and Myron Gutmann, “Casting Spells: Database Concepts for Event History Analysis,” *Historical Methods*, vol. 32, no. 4 (Fall 1999): 165-176.

**Day 2 (7/31):**

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

- 📖 J. Hajnal, “European Marriage Patterns in Perspective,” in D.V. Glass and D.E.C. Eversley, *Population in History: Essays in Historical Demography*. Chicago: Aldine. 1965, pp. 101-143.
- 📖 Recommended: Peter Laslett, “Characteristics of the Western Family considered over Time,” in, *Family Life and Illicit Love in Earlier Generations: Essays in Historical Sociology* Cambridge: Cambridge University Press, 1977, pp. 12- 49.

- 📖 Recommended: Katherine A. Lynch, “The European Marriage Pattern in the Cities: Variations on a Theme by Hajnal,” *Journal of Family History* 16, 1 (1991): 79-96.

**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

- 📖 Alexander, Michael. *Microsoft Access Data Analysis: Unleashing the Analytical Power of Access*, Wiley Publishing, Inc., 2006, pp. 1-38.

**Day 3 (8/1):**

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

- 📖 Louis Henry, “Some Data on Natural Fertility,” *Eugenics Quarterly* 8, 2 (1961): 81-91 .
- 📖 Recommended: Douglas L. Anderton and Lee L. Bean, “Birth Spacing and Fertility Limitation: A Behavioral Analysis of a Nineteenth-Century Frontier Population,” *Demography* 22, 2 (May, 1985): 169-183.
- 📖 Recommended: James Lee, Wang Feng and Cameron Campbell, “Infant and Child Mortality among the Qing Nobility: Implications for Two Types of Positive Checks,” *Population Studies* 48, 3 (1994): 395-411.
- 📖 Recommended: Katherine A. Lynch, “Infant Mortality, Child Neglect, and Child Abandonment in European History: A Comparative Analysis,” in T. Bengtsson and O. Saito eds., *Population and Economy: From Hunger to Modern Economic Growth*, Oxford: Oxford University Press, 2000, pp. 133-164.
- 📖 Recommended: Katherine A. Lynch and Joel B. Greenhouse, “Risk Factors for Infant Mortality in Nineteenth-Century Sweden,” *Population Studies* 48, 1 (1994): 117-133.

**Deane: Residuals and Influence Statistics**

- 📖 Cleves, Gould and Gutierrez 2004, Chapter 11

**\*Lunchtime Talk: Satomi Kurosu\***  
**\*Kalamazoo Room, Michigan League\***  
**\*Lunch Provided\***

**Alter: The Relational Model**

🕒 Exercise: Reconstructing Kinship

- 📖 Alexander, 2006, pp. 39-82

**\*KUROSU RECEPTION 5:00 PM-7:00 PM\***  
**Michigan Union, Room D, Anderson Room\***

**Day 4 (8/2):**

**Lynch: Household Forms and Family Formation Systems**

- 📖 G. William Skinner, “Family Systems and Demographic Processes,” in David I. Kertzer and Tom Fricke eds., *Anthropological Demography: Towards a New Synthesis*, Chicago and London: University of Chicago Press, 1997, pp. 53-95.
- 📖 Recommended: Lutz Berkner, “The Stem Family and the Developmental Cycle of the Peasant Household: An Eighteenth-Century Austrian Example,” *American Historical Review* 77, 2 (1972): 398-418.
- 📖 Recommended: Angélique Janssens, *Family and Social Change: The Household as a Process in an Industrializing Community*, Cambridge: Cambridge University Press, 1993, pp. 50-114.
- 📖 Recommended: Antoinette Fauve-Chamoux and Emiko Ochiai, “Introduction,” in idem eds. *House and the Stem Family in EurAsian Perspective*. Proceedings of the C18 Session, Twelfth International Economic History Congress (August 1998), pp. 1-19.
- 📖 Recommended: Marie-Pierre Arrizabalaga, “Basque Women and Urban Migration in the 19th Century,” *The History of the Family* 10 (2005), 99-117.

**Deane: Testing Linear Hypotheses**

- 📖 Cleves, Gould and Gutierrez 2004, Chapter 11

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

- Ⓞ Exercise: Matching people on partial names and approximate dates
- 📖 Alexander 2006, pp. 111-134, 144-152, See also Appendix A

**Day 5 (8/3):**

**Lynch: Families and Households as Systems of Social Support**

- 📖 Peter Laslett, “Family, Kinship and Collectivity as Systems of Support in Pre-Industrial Europe: A Consideration of the ‘Nuclear-Hardship’ Hypothesis,” *Continuity and Change* 3, 2, (1988): 153–175.
- 📖 Recommended: Monica Das Gupta, “Lifeboat versus Corporate Ethic: Social and Demographic Implications of Stem and Joint Families,” in Antoinette Fauve-Chamoux and Emiko Ochiai eds., 1998, pp. 444 – 466.
- 📖 Recommended: Steven Ruggles, “Multigenerational Families in Nineteenth-Century America,” *Continuity and Change* 18, 1 (2003): 139-165.
- 📖 Recommended: Daniel Scott Smith, “Life Course, Norms, and the Family System of Older Americans in 1900,” *Journal of Family History* 4 (1979): 285-295.
- 📖 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 the State in American History*. Westport, CT: Greenwood Press, 1986, pp. 87-109.

**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

## Week 3

### Day 1 (8/6):

#### **Campbell: Issues and Debates in Asian Historical Demography**

- 📖 Lee, James and Wang Feng. "Malthusian Models and Chinese Realities: The Chinese Demographic System 1700-2000." *Population and Development Review* 25,1 (1999): 33–65.
- 📖 Recommended: Wolf, Arthur. P. "Is there evidence of birth control in late imperial China?" *Population and Development Review*. 27, 1 (2001): 133-154.
- 📖 Recommended: Campbell, Cameron, Wang Feng and James Z. Lee. "Pretransitional fertility in China." *Population and Development Review*. 28,4 (2002):735-750.

#### **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**

- 📖 Smith, Ken R., Geraldine P. Mineau, Lee. L. Bean. "Fertility and Post-Reproductive Longevity." *Social Biology* 49, 3 (2002):185-205.

#### **Alter: Moving from Events to Episodes**

- ⓄⓄExercise: Marital Status over Time

### Day 2 (8/7):

#### **Campbell: Sources in Asian Historical Demography**

- 📖 Campbell, Cameron "Appendix: Sources and Measures." In Bengtsson, et al. 2004, pp. 441-476. (Also assigned Day 3 of Week 1.)
- 📖 Kim Kuen-tae. "Eighteenth-century Korean marriage customs: The Tansong Census registers." *Continuity and Change*. 20 (2005):193-209.
- 📖 Recommended: Campbell, Cameron and James Lee. . "State views and local views of population: Linking and comparing genealogies and household registers in Liaoning, 1749-1909." *History and Computing*. 14, 1+2 (2002 (publ. 2006)):9-29.

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

\*Lunchtime Talk: Timothy Guinnane\*  
\*Michigan Union, Wolverine Room\*  
\*Lunch Provided\*

#### **Alter: Aggregation**

- ⓄⓄExercise: Count older siblings by sex
- 📖 Alexander 2006, pp. 241-255

### Day 3 (8/8):

#### **Campbell: Reproduction in Asian Societies**

- 📖 Campbell, Cameron and James Lee. "Deliberate fertility control in late imperial China: Spacing and stopping in the Qing imperial lineage." California Center for Population Research working paper CCPR-041-05. 2005.



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

- 📖 Cleves, Gould and Gutierrez 2004, Chapters 12 and 13

**Alter: Coordinating episodes within households**

- ①②Exercise: Household composition over time

**Day 4 (8/9):**

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

- 📖 Tsuya, Noriko and Satomi Kurosu. "Mortality and Household in Two Ou Villages, 1716-1870." In Bengtsson, et al. 2004, pp. 253-292.

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

**Alter: "Time since x" variables**

- ①③Exercise: Survival of the preceding child

**Day 5 (8/10):**

**Campbell: Family and Household in Asian Societies**

- 📖 Campbell, Cameron and James Lee. "Kin networks, marriage, and social mobility in late imperial China." Forthcoming in Social Science History 2008.

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

- 📖 Cleves, Gould and Gutierrez 2004, Chapters 9 and 14
- 📖 Ghali WA, Quan H, Brant R, et al. "Comparison of 2 methods for calculating adjusted survival curves from proportional hazards models." JAMA 286 (2001): 1494-97.
- 📖 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

**Creighton: Poster Tutorial**

**\*Saturday\***

**Afternoon: SUMMER PROGRAM PICNIC AT BURNS PARK**

## Week 4

### Day 1 (8/13):

#### **Hacker: Classic Demographic Transition Theory and Recent Critiques**

- 📖 Notestein, Frank W..“Population: The Long View.” In T. W. Schultz (ed.) *Food for the World*. Chicago: Chicago University Press, 1945, pp. 36-57.
- 📖 Recommended: Greenhalgh, Susan. “Anthropology Theorizes Reproduction: Integrating Practice, Political Economic, and Feminist Perspectives.” In Greenhalgh, Susan (ed.) *Situating Fertility: Anthropology and Demographic Inquiry*. Cambridge University Press, 1995, pp. 3-28.

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

- 📖 Cleves, Gould and Gutierrez 2004, pp.147-152 and 278-299
- 📖 James W. Vaupel and Anatoli I. Yashin. “Heterogeneity's Ruses: Some Surprising Effects of Selection on Population Dynamics.” *American Statistician*, Vol. 39, No. 3 (Aug., 1985), pp. 176-185.
- 📖 Gilda Garibotti, Ken R. Smith, Richard A. Kerber, Kenneth M. Boucher. “Longevity and Correlated Frailty in Multigenerational Families.” *The Journals of Gerontology*; Dec 2006; 61A, 12; pg. 1253-61.
- 📖 Recommended: Smith, Ken R., Sally A. McClean. “An Introduction to the Analysis of Paired Hazard Rates in Studies of the Family,” *Journal of Marriage and the Family* February 1998 60(1): 243-257.

#### **Alter: Student Projects**

### Day 2 (8/14):

#### **Hacker: The Mortality and Epidemiological Transitions**

- 📖 Schofield, Roger and David Reher, “The Decline of Mortality in Europe,” in Schofield, Roger, David Reher, and Alain Bideau (eds.) *The Decline of Mortality in Europe*. Clarendon Press, 1991, pp. 1-17.
- 📖 Recommended: Omran, Abdel R. . “Epidemiological Transition in the U.S.” *Population Bulletin* 32, 2 (1977):1-42.

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

- 📖 Allison, Paul D. 1982. “Discrete-Time Methods for the Analysis of Event Histories.” *Sociological Methodology*. 13: 61-98.

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

- ④Exercise: A simple record linkage form

### Day 3 (/8/15):

#### **Hacker: The Mortality Transition**

- 📖 Lee, Chulhee. “Prior Exposure to Disease and Later Health and Mortality: Evidence from Civil War Medical Records.” In Dora L. Costa (ed.) *Health and Labor Force*

*Participation Over the Life Course: Evidence from the Past.* University of Chicago Press, 2003, pp. 51-87.

- 📖 Recommended: Alter, George, Muriel Neven, and Michel Oris. 2004. “Mortality and Modernization in Sart and Surroundings, 1812-1900.” In Bengtsson, Tommy, Cameron Campbell, and James Z. Lee, et al., 2004, pp. 173-208.

**Smith: Discrete-time Event-history Analysis (continued)**

**\*Lunchtime Talk: Bertrand Desjardins\***

**\*ISR 6050\***

**\*Lunch Provided\***

**Alter: Lab – Student Projects**

**\*DESJARDINS RECEPTION 5:00 PM-7:00 PM**

**Michigan Union, Wolverine Room**

**Day 4 (8/16):**

**Hacker: The Fertility Transition**

- 📖 Knodel, John. “Starting, Stopping, and Spacing during the Early Stages of Fertility Transition: The Experience of German Village Populations in the 18th and 19th Centuries.” *Demography* 24,2 (1987): 143-62.
- 📖 Recommended: Coale, Ansley J. “The Decline of Fertility in Europe since the Eighteenth Century as a Chapter in Human Demographic History.” In Ansley J. Coale and Susan Cotts Watkins, eds., *The Decline of Fertility in Europe*. Princeton: Princeton University Press, 1986.
- 📖 Recommended: van de Kaa, Dirk J. “Anchored Narratives: The Story and Findings of Half a Century of Research into the Determinants of Fertility.” *Population Studies* 50, 3 (1996) : 389-432.
- 📖 Recommended: Lesthaeghe, R. “The Second Demographic Transition in Western Countries: An Interpretation” in *Gender and Family Change in Industrialized Countries*, Karen Oppenheim Mason and An-Magritt Jensen, eds.. Clarendon Press: Oxford. 1995, pp. 17-62.

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

**Alter: Lab – Student Projects**

**Day 5 (8/17):**

**Student Reports**

**Poster Session**