

Demography and Ecology Written Preliminary Examination

January 10, 2000

PART I: MORNING EXAM

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I. Answer A or B:

A. Beginning in the last part of the 1980-90 decade, some deviant, 'hardcore' high fertility countries in Asia, Africa and Latin America made impressive progress toward more modern fertility regimes, attaining in a few years relatively low TFR's.

1. First, briefly identify two or three examples of the cases referred to above.
2. Second, provide a brief justification of why these are considered deviant cases (relative to other cases, presumably non-deviant ones).
3. Third, review the explanations put forward to account for their late fertility decline and their more recent trends.

B. Describe recent trends in nonmarital fertility in the United States. Include in your answer differentials by characteristics of the mother, e.g., age, race, ethnicity, education, and cohabitation or marital status. Discuss what are the most likely future trends. (You may refer to the Census Bureau's projections in your answer).

II. Answer A or B

A. Describe the content of the so-called Epidemiologic Transition. In your description refer to the following issues:

1. What were the three models of transition, as defined by Abdel Omran?
2. What were the stages within the Classical Epidemiologic Transition according to Omran?
3. What is the 4th stage added by Jay Olshansky, and why did he add it to the model? d) Have less developed countries experienced the transition yet?
4. How do these models incorporate disease burden or disability?
5. How is disability expected to change as countries experience the Epidemiologic Transition?.

B. Summarize the most important theoretical positions in the controversy about compression of morbidity and mortality, and provide a detailed discussion of the evidence supporting each of them. In particular, make use of empirical regularities uncovered in the US, Japan and some countries of Northern Europe. Also, briefly discuss the kinds of policy implications associated with each of these theories?

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III. Answer A or B

A. Discuss the differences between the Brass family and the Coale-Demeny family of model life tables. In your description make sure that you include consideration of the following issues:

1. How are each constructed (you don't need to give any specific formulas, but should describe the general method)?
2. Identify and describe a situation where the Brass family would be more appropriate, and one where the Coale-Demeny family would be more appropriate.
3. What are some of the reasons that model life tables are less frequently used today than they were 20 years ago?

B. You are told to evaluate the factors determining mortality, morbidity and disability. In order to go about this you decide to study individual transitions between several states: healthy, with a chronic illness, and with functional disability.

1. What kind of data would you need to use in order to understand the nature of the transitions and the effects exerted by individual or community characteristics?
2. What kind of model could you use to describe and summarize data documenting transitions between states?
3. What kind of model would you use to estimate effects of covariates?
4. How would you summarize your findings in an intelligible way?