

Douglas C. **Ewbank** (Ph.D., Economics, Princeton, 1975) is Research Emeritus Professor of Sociology; he served as Acting Director of the PSC in 2006. Ewbank has served on the Board of Directors of the PAA and on a number of NICHD and NIA scientific review panels, also on 2 NRC panels, and was a Deputy Editor of *Demography*. He chaired a working group of the National Research Council's Panel on Population Dynamics of Sub-Saharan Africa of the Committee on Population,

Scientific Accomplishment. Ewbank's recent research has focused on longevity and chronic disease at the older ages. This has included research on excess mortality associated with Alzheimer's disease and co-authoring half a dozen clinical studies on Alzheimer's disease and Parkinson's disease. He is currently studying the genetics of longevity for which he received support from an NIA R01 on which he was the PI. His work on the Apolipoprotein-E gene (APOE) provides the strongest evidence of an association between common polymorphisms and longevity. He demonstrated that differences in the APOE allele frequencies across countries explain about 12-14% of the variance in mortality over age 65 in Europe. The method underlying this research is described in papers in *Genetic Epidemiology* and *Pop Dev Rev*. Most of the data on differential mortality by genotype inheres in "centenarian studies" and in cohort studies. The translation of differential mortality incidence by genotype into mortality differentials in populations involves nesting both types of data for different age ranges within a general multi-state life table. In this way, the approach serves a meta-analytic function that can combine data from numerous studies, the vast majority of which are too small to provide precise estimates. The snippets of data are translated into the age- and gene-specific mortality rates of the life table (and, hence, life expectancy) by the method of maximum-likelihood. This translation is path breaking work as it provides a rare synthesis of genetics and demographic models. It will grow in importance as the search for common genotypes associated with longevity covers more genes. (A corollary is that there are genes implicated in mortality such as the BRCA genes for breast cancer whose effects are *not* detectable at the population level.) His most recent work, in *J Gerontol*, demonstrates that the association between APOE genotype and mortality differs across race/ethnic groups (Europeans, African-Americans, Japanese, Chinese and Koreans) but there is no evidence of differences within individual race/ethnic groups.

Present and Future. He is completing research on the prevalence of cognitive impairment and dementia in Mexico using data from the Mexican Health and Aging Study (MHAS) an NIA R01 (**Soldo**, PI). He is currently beginning a collaboration with R. Govindaraju, of the Dept of Neurology at Boston U. to study the genetics of longevity using genetic data from the Framingham cohorts. The demographic models that he developed to study APOE and mortality will enable the integration of detailed data from Framingham on 18 genes with less detailed published data on the same genes. He is also working with **Zuberi** to expand access to the census data in the ACAP to find continued funding for the African Census and Analysis Project (ACAP) archives; they anticipate submission of an NICHD application later in the year.

PSC and Research. Ewbank's research is primarily funded by his NIA R01; he has also been supported by an NIA P30 (J. Trojanowski, PI) at the Alzheimer's Disease Center, where he oversaw the Alzheimer's Disease Patient Registry and provide statistical consulting to members of the Center, and by an NIA P01 (J. Trojanowski, PI) on the molecular substrates of aging and neuronal death, for which he served as the statistician for a project examining the neuro-pathological correlates of dementia in patients with Parkinsons' Disease. He has an NIA R03 application under review. Ewbank serves as the associate director of the Population Aging Research Center, which is funded by an NIA P30 (**Soldo**, PI) and was recently Acting Director of the PSC as supported by this NICHD R24 (**Smith**, PI) Ewbank has served as head of the Library Committee within the CITID core. With **Smith**, he recruited and hired Crane as the administrative Associate Director of the PSC in 2006. He also coordinated the searches that lead to hiring Perez and Fuller in the PSC Library. He will serve on both the Demographic Methods and Biomarkers units of the Methods section of the Development Core. He is a Faculty Associate of ACAP (**Zuberi**, Director). He is working with **Perez** to catalogue and find outlets for unfinished work by former PSC research associate and intellectual mainstay E. van de Walle. In particular, they are collating and cataloguing an extensive annotated bibliography of primary sources on contraception in the US and Europe between about 1600 and 1920 prepared by van de Walle.