

Studying and Applying Population Data

By Lisa Coston Hall

From *Tar Heel Junior Historian* 45:2 (spring 2006).

Population numbers can be interesting to read about, but do they matter? They do to demographers. Merriam-Webster's Collegiate Dictionary, Eleventh Edition defines demography as "the statistical study of human populations especially with reference to size and density, distribution, and vital statistics."

Bill Tillman, who serves as North Carolina's state demographer, studies a range of statistics and information to estimate current population and to project (or forecast) the future population of North Carolina and its counties. His work is highlighted on the State Demographics Unit's Web site at demog.state.nc.us/, which includes links to data from the U.S. Census Bureau. Tillman helps census officials collect data and review data and methods. He also uses census data regularly in his job, which helps in a lot of planning efforts and also involves understanding the stories behind the numbers.

"If you just skim the numbers, it looks like North Carolina is a fairly fast-growing state compared to the rest of the U.S.," Tillman said. The real story, according to Tillman, is fantastic growth in some areas, but population loss and poverty in others. Areas are prospering around Raleigh-Durham, Charlotte, Forsyth and Guilford counties, and Wilmington, but other areas are losing population and struggling. Especially in the northeastern part of the state, he said, it's a totally different world.

A number drawing attention recently is the growth in the Hispanic population. "The percentage increase is what gets the attention, but the actual numbers are not huge compared to the whole," Tillman said. "We currently have 500,000—some Hispanics, which in some states you would hardly notice. The real surprise is that we had so very few Hispanics until just a few years ago."

Money is one reason demographics—and the state demographer—matter. The state collects the sales tax that everyone pays and distributes some of it back to counties and municipalities using a population-based formula. "If Raleigh gets \$200 per year per person, and you underestimate by 10,000 people, you're talking \$2 million," Tillman said.

The same goes for the state's gas tax, which gets parceled out to municipalities to fund roads. Tillman's office also makes long-range population projections that factor into things like the "certificates of need" that the state awards before nursing homes can be built or hospital beds can be added. And the salaries of North Carolina clerks of court are based on county population projections.

Tillman considers population trends such as migration—using, for instance, estimates that the U.S. Census Bureau produces based on comparing income tax filing addresses—but his work also centers on statistics such as the natural aging of the population. Other numbers he might study for various projects include births, deaths, vehicle registrations, and elementary school and Medicare enrollment. He carefully watches annexation—when a city increases its physical (or geographic) boundaries, which often means adding residents. “Usually, growth happens at the fringes of the city limits, and then the city takes those areas in,” Tillman said.

Many demographic studies break people down into statistical groups based on characteristics like age, race, and gender. Some trends are relatively easy to notice. For example, the American baby boom population—those born in the years following World War II—can be noticeably tracked. That data can suggest things such as the number of people who will apply for retirement benefits at a certain time. Birth rates can be predicted fairly accurately based on the ages of the female population at a particular place and time.

Migration can be tougher to gauge or predict. “You assume the future repeats the past to a degree, but that’s not necessarily true because unusual factors can come up,” Tillman said. “There are things you can predict, such as the inflow of eighteen-year-olds into Orange County and the outflow of twenty-two-year-olds, related to UNC–Chapel Hill. In places like Onslow County, where there is a strong military presence, you expect a certain amount of military people to come and go.”

Other demographers study topics such as life expectancy, death rates, or overpopulation. “We don’t have overpopulation here,” Tillman said. “If North Carolina closed its borders, because women here have fewer than two babies on average, our population would decline quickly.”

At the time of the publication of this article, Lisa Coston Hall is a historical publications editor at the North Carolina Museum of History. She edits *Tar Heel Junior Historian* and other materials.