



Commentaries

Why People In RI Won't Drive Far: A Scientific Explanation

People in RI don't like to drive long distances. It's not that they don't like to drive. They do. But if you ask them to drive several miles, the common response is, "I can't do that. It's too far."

When we started recruiting for DATATOP in the late 1980s, the first study ever done to attempt to slow progression of **Parkinson's disease (PD)**, it got national press because it was, potentially, a landmark study. It was the first study of any progressive neurological disorder in which the goal was to slow disease-progression. Someone in Newport called me, asking to be in the study. "Will you come down to Newport?" "No, you'll have to come to Providence." "How often?" "Every three months." "That's too far. If you come to Newport I'll be happy to participate."

Ten percent of adults who were born in Woonsocket have never been to Providence; 18% have never been to Boston (informal estimates).

I recently saw a patient from Oklahoma who was visiting his daughter in RI. He wanted me to be his Parkinson's disease doctor. I suggested finding someone close to home. He asked me to recommend someone. I said that I didn't know anyone in Oklahoma, so I asked him to name the large cities nearby in other states. "Dallas is only a five hour drive. Do you know anyone there?"

It has been noted time and time again that Rhode Islanders refuse to drive "long distances." In most studies (references available on request) this distance is usually about 10 miles but has been as far as 13. It is widely believed that this is learned behavior; however, we have observed that children born of native Rhode Islanders (defined as being born in RI and raised in the state until age 16), who were adopted and raised in families outside of RI, even taken out of the state within days of birth, never having met their biological parents, still won't drive more than 10 miles, on average.

Letters from the early 1800s suggest that this phenomenon was well-recognized, although transportation difficulties made this

behavior less deviant in those days. Jedediah Culls, for example, notes in a letter, that the drive in his horse-drawn cart from Newport to Middletown might take him over 2 hours, which was "way too far" to consider, despite not having seen his son or grandchildren in over a year. Mary Chace noted with grief that her daughter, Elizabeth, had settled "wicked far" away, so that she and her husband may not ever see the daughter again, although the Indians in the region considered the distance less than a day's walk. The number of offspring produced by just these two families was 25, with almost all surviving into adulthood.

At ten polling stations in the 2008 presidential election, the RI Deviant Behavior Study Group distributed the **RI Travel Questionnaire (RITQ)** to all voters who had at least one parent born in RI. Respondents did not have to have been born in RI. The RITQ asked respondents to record on a visual analog scale how far they considered certain distances, from 10 to 100 miles using increments of 10 miles, and then from 25 to 500 miles using increments of 25 miles (very near, near, not too far, far, very far, too far). They were then asked how likely they would be to drive 25, 50 or 75 miles in each of three situations: (1) to take their child to a soccer game, (2) to visit a close friend in the hospital, (3) to see the only doctor in the world who could save them from some dread disease. The same questionnaire was given to other RI voters whose parents were both born outside of RI but who grew up in RI. The questionnaire finally was given to voters at 10 polling places in Ohio whose parents were not born in RI and who themselves had never been to RI.

We found that a surprising 50% of people born to at least one RI native were willing to drive 75 miles if their life depended on it. Twenty percent would visit a friend in the hospital at 75 miles, and 80% would take their child to a soccer game at that distance. In comparison to the two non-"native" groups, these numbers were significantly different statistically. Both those liv-

ing in RI but not of RI "stock" and those who had no RI interactions endorsed driving 75 miles to save their lives at 100%, whereas 90% would visit a friend in the hospital and 40% would drive 75 miles to see a child's soccer game. When the driving distance was 50 miles, the numbers for RI "natives" and the two control populations were similar to those for 75 miles, but at 25 miles the number changed considerably so that 85% of RI natives would drive 25 miles to save their lives, and to visit a friend in the hospital, while 60% would travel this distance to see the soccer game, vs 100%, 100% and 75% (p values not significant) for people in Ohio without a relationship to RI.

These data suggested a genetic explanation for native RIers' reluctance to drive. Using very new statistical techniques we found that a single abnormal gene could explain the driving limitation as well as why RI natives give driving directions based on physical markers that often were removed (like demolished buildings or trees that had been cut down) years before.

Since the work on this project is evolving we can share only preliminary results on its molecular biology, awaiting confirmation. We have found a remarkable similarity between the gene thought to confer driving conservatism in RI drivers with a gene thought to allow homing pigeons to return to their home, although this gene has not yet been found in other birds or primates. How this gene could have evolved is unclear but one, currently theoretical, explanation is based on the old homily, "ontogeny recapitulates phylogeny," suggesting that evolutionary developments are not necessarily unique and may reoccur even in different species. When these changes lack survival advantages they fail to propagate.

In this case we can conclude that advantageous or not, the gene is unlikely to spread very far.

[April Fool]

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