Mitchell's Musings 12-7-15: Profiles in Confusion

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Concerns about "profiling" seem to rise and fall as a result of incidents that receive substantial public attention. Police shootings of blacks in various confrontations around the country are examples. Terrorist incidents such as the recent Paris and San Bernardino events are another. Unfortunately, the popular discussion of profiling is often muddled.

In a sense, profiling involves the use of *perceived* probability. For example, now that we are in our seventies, my wife and I are often directed to the faster "pre-check" line for airport security. People with pre-check status have been determined by TSA to be less at risk for causing a terrorist incident than others. Normally, if you want such status, you have to pay for it and then be willing to be "profiled." That is, TSA examines whatever personal characteristics you have that someone thinks makes you more or less likely to engage in terrorism. If you seem to be at low risk for being a terrorist, you get pre-check status.

Apparently, the same someone has decided that folks in their seventies are low risk for terrorism so, although we don't pay for the privilege, we often get pre-check status anyway. Note, however, that *low risk* is not the same thing as *no risk*, paid or unpaid. And one could ask whether by revealing that older folks are considered less suspicious, TSA is not raising the risk that a terrorist group might use elderly people in an attack. (But that is another conversation.)

It is hard, in fact, to make decisions without their being some perceived probability in the background. A whole field of behavioral economics has developed showing how choices that people make can be influenced by such perceptions. I am told that there is evidence that the more adjectives which are used to describe a product (even if you have no knowledge suggesting that the adjectives carry real information), the more the product seems appealing. I recall a journal article from a marketing colleague in which retail lumber sold better if it was described as originating in a "northern forest," or some such meaningless descriptor. Presumably, customers have a belief that if an adjective is used, it must have meaning and thus the perceived probability of obtaining a higher quality product rises with the number of adjectives.

Workplaces and their decisions are filled with such assumed probabilities. Interviews of job candidates are ultimately based on the subjective probabilities of the interviewers as to what will make a successful employee. Even seemingly objective data such as educational attainment (receiving a degree, receiving a degree from a prestigious school) when used in recruitment are based on subjective probabilities in most cases. And, of course, the subjective probabilities may be incorrect.

Some profiling is based on hard data, notably in insurance. It is profiling when an insurance company charges a lower premium to a 25 year old than to a 65 year old for life insurance. But the profiling is based on actuarial tables. At age 25, the probability you will die in the next year is under 0.1%. At age 65, the probability is about 1.3%.[1] So the cause of the higher premium for the latter is evident. But, of

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[1]http://www.cdc.gov/nchs/data/nvsr/nvsr64/nvsr64_11.pdf. This source is also used for the table below in the text.

course, a 25 year old might be killed in a traffic accident before reaching 26. And a 65 year old might live to be 100. The future cannot be known with certainty, even with evidence-based profiling.

Actuarial tables, because they are based on hard numbers, are not subjective unlike, say, personal factors that might persuade you as a recruiter to hire someone. The tables can show you things that you think are so, but are not. Suppose I asked you to rank non-Hispanic whites, non-Hispanic blacks, and Hispanics by life expectancy at birth (by descending order of expectancy, i.e., longest first). Without looking it up, i.e., based on your pre-existing knowledge, what would your ranking be? Would you have selected Hispanics as having the longest life expectancy of the three groups? Unless you were an expert in demographics, you likely instead would have picked non-Hispanic whites. (White privilege?) But here are the numbers in years of life (for the year 2011 based from 2015 Centers for Disease Control and Prevention data):

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Life expectancy at birth

Group                 Both sexes   Male    Female

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Non-Hispanic white      78.8       76.4     81.1

Hispanic                81.6       79.0     83.3

Non-Hispanic black      74.9       71.7     77.9

All                     78.7       76.3     81.1

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So it turns out that Hispanics have longer life expectancies than the other two groups, perhaps contrary to your expectations. In terms of life expectancy, your best bet in the U.S. is to be an Hispanic female.

Even though there may be hard statistical evidence of some tendencies, we sometimes choose not to profile. For example, if you obtain life insurance through your employer (as opposed to the external retail insurance market), you will pay the same for given coverage (or get the same coverage at no difference in cost) regardless of your sex. Because we outlaw discrimination in employment by sex, employers will charge the same and/or offer the same coverage. In effect, however, the equality in this case amounts to a transfer from females to males. (Females have lower death rates so are cheaper to insure.)

On the other hand, in the case of job-based defined-benefit pensions (or annuities obtained through employers based on defined-contribution pensions), since the same terms are offered to males and females, there is an implicit transfer from males to females. (Males on average will collect pensions for fewer years and thus are cheaper.) By law, we choose to ignore statistical profiling by sex (and race and national origin) when it comes to employment.[2]

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[2]The pension area is in fact more complex. First, survivor/dependent benefits tend to even out the male/female differential, since survivors/dependents are likely to be of the opposite sex. Second, defined-benefit pensions tend to involve implicit subsidies from short-term, higher turnover workers to long-term career employees. So if women have shorter careers, they may be subsidizing males with longer careers.

In short, profiling by itself is a neutral term based on using perceived probability for decisions. Sometimes that perception, however, is incorrect and not based on hard evidence. Sometimes – as with ignoring sex and other characteristics for job-based insurance purposes – we choose through public policy not to use available information. And sometimes, for reasons of civil liberties, we make a special effort not to use it. Profiling is a neutral concept. What you do with it, however, has consequences.