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Chapter Title: Comment on "Expectations, Aging, and Cognitive Decline"

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Comment John B. Shoven

I found this chapter to be thought provoking and stimulating, mostly in the questions that it raised. I think that there is real value in taking a preliminary empirical look at the consequences of declining cognitive abilities among the elderly in terms of their optimism and in terms of their willingness to answer questions about probabilistic expectations. That said, the results of this chapter are limited by the questions available in the HRS data set and they are not very clear. It does appear that the average person becomes somewhat less optimistic as they age, although the magnitude of the effect is modest. The results on their willingness to answer a probabilistic expectations question are even less impressive. When you ask whether those who have suffered a particularly sharp decline in cognition show less willingness to offer an answer to expectations questions, the answer appears to be “no.”

The chapter reviews the way cognition is conventionally measured using the HRS. Certainly, the gradual decline in cognition throughout the age range of the HRS with an acceleration in the rate of decline starting at roughly seventy-five is well known and the expected result. A more interesting question, at least to me, would be whether age-specific cognition has been improving along with age-specific health and age-specific mortality. I take it that the mortality improvements, which have been pretty dramatic, indicate that on average most human organs are in better shape at a particular age than in the past. For instance, the mortality of sixty-five-year-old males has dropped from 3.5 percent in the 1950s to 1.5 percent today. This has been accompanied on average by healthier hearts and lungs, for instance. What about the brain? Is the cognition of sixty-five-year-olds today better than it was sixty years ago? The HRS, which has been in the field for just over twenty years, could begin to offer some clues. The authors go to some length to obtain the pure age effect on cognition and I guess what I am saying is that the pure cohort effect would be of interest as well. I was intrigued by the significant and large divergence between the cross-sectional profile of cognition and the profile using cumulative slopes in figure 9.3. The actual cross-sectional evidence shows a much more gradual deterioration in cognitive ability. Part of this may be due to the fact that those with high initial cognition have better mortality and therefore are more likely to be in the sample at later ages. Is this all that is going on or is there more to the story?

The optimism and uncertainty results in the chapter are based on six questions in the HRS. I summarize the questions here: (a) chance of surviving to age A , (b) probability of a sunny day tomorrow, (c) chance that

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your income will keep up with inflation over the next five years, (d) chance of losing your job in the next twelve months, (e) chance of a mutual fund invested in Dow Jones Industrial-type stocks being higher in a year, and (f) chance of a major economic depression in the next ten years. These are not great questions for this study. Here are just some of the problems: Question (b), how will the respondent answer if the actual weather is “partly cloudy”? Question (c), as people leave the labor force between ages fifty and seventy, the actual chance of keeping up with inflation may go down—reducing your answer as you age may not reflect increasing pessimism; it may reflect reality. Question (d) has a similar problem in that the chance of losing a job conditional on having one now is probably a function of age—saying that it is more likely as you age, again, may not be increasing pessimism, simply reality. Question (e), my guess is that most people don’t know what the Dow Jones Industrial Average is—most are not in the stock market and have little reason to keep informed about it. And question (f), what is the definition of “major economic depression”? Even prime-age professional economists such as National Bureau of Economic Research (NBER) research associates would have difficulty answering this question. It is possible that people with excellent cognition will be smart enough to answer “don’t know,” whereas people with reduced cognition will offer a guess of an answer.

The one result that stands out in Kézdi and Willis’s chapter is that on average people become more optimistic about their survival probabilities, relative to a life table, as they age. For the other five questions they become slightly more pessimistic about the weather and somewhat more pessimistic about the stock market. I hesitate to reach conclusions about the real income question and the job loss question because the “right” answer may be a negative function of age.

The authors define uncertainty as a “don’t know” answer or in some cases as a “50 percent” answer. They find that people are more likely to answer “don’t know” or “50 percent” for four of the questions—the stock market question, the economic depression question, the sunny day question, and the inflation protection question as they age. Interestingly, they do not have more difficulty answering the survival question as they get older.

When the authors investigate whether those with particularly severe cognitive decline become more pessimistic and/or more uncertain, they come up with mixed results. On the optimism/pessimism front, they do find that those with more severe cognitive deterioration tend to become more pessimistic, particularly about the chances of an economic depression and the chances of a stock market increase. The other coefficients also reflect increasing pessimism, but the magnitude of the coefficients is modest. On the uncertainty question, or the willingness to offer an answer to these questions, it appears that cognitive decline has little to do with it. The coefficient on cognitive decline is insignificant for four of the six questions and of the opposite sign for the other two. So, this is a puzzling result if one thought that forming

expectations is a quantitative calculation that would become more challenging with reduced cognition. The evidence does not support this theory.

As I said at the outset, I found this chapter stimulating; not for the answers that it came up with, but the questions that it asked and the thoughts that it stimulated. I came away thinking that on average people do get slightly more pessimistic as they age and as their cognitive abilities deteriorate. The one question that I would like more evidence on is whether cognition is more associated with age or more associated with mortality risk. Over time, age-specific mortality risk has changed dramatically. I wish I knew more about age-specific average cognitive ability and that may be an additional interesting project for these authors or others.