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Comment Erzo F. P. Luttmer

The key contribution of this chapter is a straightforward but profound insight. For policies that are age dependent because functioning depends on age, years-since-birth is generally not the best measure of age. For example, we might want to set the retirement age at an age where workers’ health on average becomes too poor to reasonably expect work or where a worker has a certain number of remaining years to live. The chronological age at which this occurs is generally not constant over time or across groups. Thus, rather than defining retirement age as years-since-birth, this chapter argues it should depend on a “new age” measure such as mortality risk or remaining life expectancy. More generally, this chapter argues that in many policy settings the relevant measure of age is not chronological age but a measure of age that captures an individual’s functioning. In short, it is a thought-provoking chapter that challenges the reader to think at a more conceptual level about what aging really means, rather than narrowly counting the years since birth.

The chapter also discusses a proposal to remove the incentives for early retirement in the Social Security system. This is a sensible proposal, but it is somewhat disconnected from the rest of the chapter because most of the substantive elements of this proposal have little to do with the switch

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from chronological age to a “new age” measure such as the remaining life expectancy. Because the proposal has been more thoroughly presented and analyzed in Goda, Shoven, and Slavov (2009) and has been discussed by me in that same volume, I will not discuss it further here.

Shoven motivates the case for new age measures by noting the tremendous decreases in age-specific mortality between 1970 and 2000. A fifty-nine-year-old male in 1970 had roughly the same mortality risk as a sixty-five-year-old male in 2000. Thus, using mortality risk as a measure of age, a fifty-nine-year-old male in 1970 was as old as a sixty-five-year-old in 2000. Thus, using mortality risk as a measure of age, men have effectively become six years younger in the span of three decades. Women also experienced a substantive decrease in age-specific mortality, and the age-specific mortality is much lower for women than for men. If age is measured by age-specific mortality, a seventy-year-old female in 2000 is as old as a sixty-five-year-old male.

These decreases in the effective age are remarkably insensitive to the new age measure chosen. Using an alternative measure of mortality risk, Cutler, Liebman, and Smyth (2006) find that a sixty-eight-year-old person in 2000 has effectively the same age as a sixty-two-year-old individual in 1960. Furthermore, a sixty-seven-year-old in 2000 has the same remaining life expectancy as a sixty-two-year old in 1960. In other words, also for these alternative measures, individuals have effectively become about 1.5 years younger per decade in the last four decades. One might be concerned that a large fraction of the age-specific mortality reductions can be attributed to medical interventions keeping people in very poor health alive. If this were the case, we would observe decreases in age-specific health. In fact, the opposite appears to be happening. Cutler, Liebman, and Smyth (2006) show that, conditional on age, both subjective and objective indicators of health have increased substantially over the last couple of decades. In other words, people not only live longer, but are also healthy longer.

The increases in life expectancy, however, are unequally distributed. Meara, Richards, and Cutler (2008) show that between 1990 and 2000, the life expectancy at age twenty-five of those with any college increased by about 1.6 years while the life expectancy of those with a high school degree or less increased by less than a month. This pattern also occurs in each of the four race-by-gender groups. Within each group, the life expectancy at age twenty-five of those with at least some college increased significantly more than that of those with a high school degree or less. Thus, while the aggregate reductions in age-specific mortality may indicate that the Social Security retirement age could be increased, such an increase would harm the less educated groups, who have not experienced reductions in age-specific mortality.

The chapter makes a compelling case that it is worthwhile to think about age in terms of mortality risk or remaining life expectancy, especially in light of the large changes in age-specific mortality risk in the last several decades.

The chapter also claims that policy would be better if age were measured by a new age measure such as mortality risk or remaining life expectancy. It would be worthwhile to develop the underpinnings of this claim. In principle, the same policy can be implemented independently of how age is measured. For example, the Personal-Security Accounts (PSA) plan (1994 to 1996 advisory council on Social Security [SS]) set the rise in the retirement age (in years-since-birth) such that the ratio of years in retirement to years working remained constant. Here the proposed adjustment was automatic, but in principle the adjustments could also be made periodically by the policymakers. Shoven's claim that policy would be better if based on a new age measure thus rests on the assumption that in practice, policymakers seldom make such adjustments. This assumption seems reasonable, but it would be good to explore what underpins it. What is the model of the political process that makes political change easier with the new measure of age than with chronological age? Even if change is easier with the new age measure, does it imply that the policy would be closer to the optimal policy?

Two major implementation issues need to be resolved in order to base policy on a new age measure. First, new age measures are not observed at the individual level—we do not observe an individual's true mortality risk or true remaining life expectancy. Instead, we estimate these variables conditional on chronological age and, possibly, other demographics. On which of the other demographics, if any, should the new age measure be conditioned? Not conditioning on any other demographic variable would lead to rather imprecisely estimated new age measures given the large differences in mortality and longevity by race, gender, and education.¹ Even accepting such level differences, the differences in trends in the new age measures by demographic group could have politically sensitive impacts. For example, an increase in retirement age linked to average increases in life expectancy would reduce the absolute number of years of retirement benefits for those groups, such as those with a high school education or less, that have not experienced an increase in life expectancy. Conditioning on demographics creates a more accurate estimate of the new age measure but also raises issues. Even though everyone would be eligible for the policy at the same level of the new age measure (e.g., a given remaining life expectancy), eligibility in terms of chronological age would depend on the conditioning demographics. Would it be acceptable to have the chronological retirement age depend on conditioning demographics such as gender, race, or educa-

1. The differences in life expectancy across demographic groups are very large. For example, Meara, Richards, and Cutler (2008) document that life expectancy at age twenty-five is roughly five years higher for women than for men, five years higher for whites than for blacks, and five years higher for those with some college or more than for those with a high school degree or less. Moreover, these effects are roughly additive. Thus, while a black male with a high school degree or less has a remaining life expectancy of forty-two years at age twenty-five, a white female with some college or more has a remaining life expectancy of fifty-nine years.

tion? Another possibility is to try to get market-based estimates of the new age measure. For example, the government could solicit bids for annuity or life insurance contracts for each individual (and purchase a fraction of these contracts to make the bids incentive compatible). The winning bid price of the contract for a given individual would allow one to calculate the market-based mortality or longevity expectation for that individual. This expectation would implicitly be based on all observable individual-specific characteristics.

Second, it needs to be decided when an individual's new age is estimated. Again, consider the example of eligibility for Social Security benefits being determined by an individual reaching a given remaining life expectancy, say fifteen years. The estimate of remaining life expectancy may change over time. For example, when the individual has a chronological age of twenty-five, we might estimate that at age sixty-nine the individual will have a remaining life expectancy of fifteen years. However, due to changing mortality patterns over time, at age sixty, the estimate of the age at which the remaining life expectancy is fifteen years may have increased to seventy-three years. For planning purposes, it is useful to know one's retirement eligibility in terms of chronological age. Thus, when would the individual learn his chronological retirement age? This involves a trade-off between the benefit of having an accurate measure of remaining life expectancy (the case for informing the individual relatively late) and the benefit of giving the individual more time to plan (the case for informing the individual relatively early).

Finally, it strikes me that using a new age measure rather than chronological age is fundamentally about fairness rather than efficiency. For example, a new age measure does not give much guidance about what the efficient retirement age is, or even how the efficient retirement age changes. However, basing policy on a new age measure rather than chronological age changes which individuals are treated similarly (because those who share the same new age do not generally share the same chronological age). Thus, the choice between basing policy on new age versus chronological age has large equity implications across generations and, if new age measures are conditioned on demographics, within generations.

In conclusion, Shoven makes a compelling case that we should think about aging in terms of measures of functioning (such as mortality risk or remaining life expectancy) rather than simply chronological age. This is important because the remarkable increase in life expectancy indeed requires a reevaluation of policies defined in terms of chronological age. Similarly, the chapter raises the question of the equity of policies based on chronological age given the tremendous disparities in new age measures across population groups of the same age. Since new age measures offer limited guidance on the optimal level of a policy itself, their greatest contribution is that they give guidance on the fairness of policies. The implementation of

new age measures is harder than chronological age, but the implementation issues do not seem insurmountable.

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