The Law and Economics of the Elderly

Richard A. Posner, Aging and Old Age
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Thomas S. Ulen

That time of year thou mayst in me behold
When yellow leaves, or none, or few, do hang
Upon those boughs which shake against the cold,
Bare ruin'd choirs, where late the sweet birds sang.
In me thou seest the twilight of such day
As after sunset fadeth in the west,
Which by and by black night doth take away,
Death's second self, that seals up all in rest.
In me thou see'st the glowing of such fire
That on the ashes of his youth doth lie,
As the death-bed whereon it must expire
Consumed with that which it was nourish'd by.
This thou perceivest, which makes thy love more strong,
To love that well which thou must leave ere long.

William Shakespeare
Sonnet LXXIII

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I. Introduction

Judge Richard A. Posner[1] is one of the most original and prolific writers of our day.[2] He has painted myriad legal and extralegal subjects on his canvas, always using the base hue of economics but more recently mixing in pragmatism.[3] Now, at the age of fifty-five, Judge Posner has turned his prodigious talents to issues affecting the elderly.[4] The result is engaging, beautifully written, thoughtful, and controversial.

Judge Posner brings economic theory to bear on aging and old age. The questions that he examines are not, however, those economic issues one traditionally associates with the elderly. Those traditional concerns have had to do with the extent to which a bequest motive influences the saving and consumption decisions of the elderly and the extent to which Social Security benefits affect the labor-supply decisions of the middle-aged and elderly.[5] Judge Posner's use of economics here is different. He looks at the behavior and psychological makeup of the elderly and the aging through the lens of economic theory. "The basic hypothesis of the book is that economics can do a better job of explaining the behavior and attitudes associated with aging, and of solving the policy problems that aging presents, than biology, psychology, sociology, philosophy, or any other single field of natural and social science."[6]

Thus armed, Judge Posner looks at some legal issues of old age in a novel and controversial way. For instance, Judge Posner finds

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1. Richard A. Posner is Chief Judge of the U.S. Court of Appeals for the Seventh Circuit and senior lecturer at the University of Chicago Law School. He is one of the founders of the discipline known as "law and economics" or the "economic analysis of law" and is the current President of the American Law and Economics Association.

2. Judge Posner is the author of, among many other things, *Law and Literature: A Misunderstood Relation* (1988); *The Problems of Jurisprudence* (1990); *Cardozo: A Study in Reputation* (1990); *Sex and Reason* (1992); *Economic Analysis of Law* (4th ed. 1992); *Private Choices and Public Health: The AIDS Epidemic in an Economic Perspective* (1993) (with Tomas J. Philipson); and *Overcoming Law* (1995). He also writes articles for scholarly journals and is said to write as many opinions as any other member of the federal judiciary. The substance and breadth of this output is remarkable, raising the question, "How does he do it?"

3. *See, e.g.*, RICHARD A. POSNER, OVERCOMING LAW 1-15 (1995).

4. RICHARD A. POSNER, AGING AND OLD AGE (1995).

5. On these traditional economic issues of old age, see the excellent survey by Michael D. Hurd, *Research on the Elderly: Economic Status, Retirement, and Consumption and Saving*, 28 J. ECON. LITERATURE 565 (1990). *See also* ISSUES IN THE ECONOMICS OF AGING (David A. Wise ed., 1990); STUDIES IN THE ECONOMICS OF AGING (David A. Wise ed., 1994).

6. POSNER, *supra* note 4, at 1-2.

that the elderly are *not* a financial drain on the rest of society, that they are *not* responsible for a disproportionate share of automobile accidents, that the benefits of carefully regulated physician-assisted suicide outweigh the costs, and that some notable recent attempts by Congress to correct particular problems affecting the elderly (the Employees Retirement Income Security Act (ERISA)[7] and the Age Discrimination in Employment Act (ADEA) and its amendments abolishing mandatory retirement[8]) were unnecessary and have become inefficient.

The book has three parts. The first (entitled "Aging and Old Age as Social, Biological, and Economic Phenomena") reviews the demographic statistics about aging and old age and develops a simple economic theory of aging. The second (entitled "The Economic Theory Elaborated and Applied") extends the theory sketched in the first section. And the third (entitled "Normative Issues") explores the implications of the economic theory for elder law. My review will roughly follow these divisions. I make no presumption in this review that the reader knows economics; rather, I shall develop the economics as I go and only where it is necessary to understand Judge Posner's work.

II. The Biology and Demography of Aging

Aging or senescence appears to be a nearly universal characteristic of life on Earth. This raises the questions of what, why, and how. Specifically, what are the general characteristics of senescence? And why does it occur? How does the process of natural selection choose aging and death rather than youth and life for all species? After I attempt to answer these questions, I shall briefly review the demography of the elderly.

A. What Characterizes Human Senescence?

Judge Posner characterizes aging as a natural process that involves predictable changes in the physical and mental makeup of the person and in the relationship that the person has to his or her environment. Consider, first, the physical or somatic changes. These include "diminution in such areas as athletic and related motor

7. 29 U.S.C. §§ 1001-1461 (1994).
8. 29 U.S.C. §§ 621-634. Congress passed the Act in 1967. The 1976 amendments prohibited mandatory retirement before age 70, and the 1986 amendments prohibited mandatory retirement altogether.

capabilities, reflexes, and muscle tone; physical strength, energy, and stamina; acuity of vision, hearing, and other senses; fertility and potency; scalp hair, hair color, and the smoothness of skin; the efficiency of the immune system; height and the percentage of weight accounted for by muscle."[9] There are also predictable mental changes as we age: "loss of memory (especially short-term memory), diminution in reckless physical courage and in sexual desire, diminished willingness to take financial risks, impairment of puzzle- and problem-solving ability, and reduced willingness to adopt new ideas or reexamine one's old ideas."[10] Although these are the median or mean changes, there is variability around that mean within each age cohort. Finally, a person's relationship to his or her environment changes as a result of aging. Judge Posner identifies three such changes: "(a) the increasing proximity of death . . . ; (b) the increased ratio of knowledge to imagination in the cognitive balance . . . ; and (c) changes due to time spent working (experience and its baleful obverses, inflexibility, boredom, and sometimes burnout) and therefore merely correlated with aging."[11]

Of these changes, one that Judge Posner makes much of in the remainder of the book—and one, therefore, to which I want to give special attention—is the change in cognitive abilities that comes with age. He summarizes the most important of those cognitive changes—a change he calls the "knowledge shift"—as a movement from "fluid" to "crystallized" intelligence.[12]

Fluid intelligence is the intelligence that is in greater abundance when we are young; it is the ability to analyze any situation, to learn new techniques of analysis, to solve problems, to deal with abstractions rather than concrete instances, to think deductively, and to build theoretical models. Very importantly for the discussion to come, fluid intelligence declines with age.

Crystallized intelligence refers to one's knowledge base, to the accumulation of concrete experiences and the inference of lessons from them, to the competencies of oral and written expression, to inductive abilities, to increasing spatial orientation, and to "common sense." As with fluid intelligence, there is an important relationship

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9. POSNER, *supra* note 4, at 19.
10. *Id.*
11. *Id.* at 22.
12. *Id.* at 68-69.

between crystallized intelligence and age: this form of intelligence grows with experience and so tends to increase with age.

There are several important implications of the different forms of intelligence and their correlation with age. One is that, to the extent that fluid intelligence is more important in learning than crystallized intelligence, young people can learn more easily or faster than older people. As an illustration, Judge Posner notes that language acquisition is a fluid-intelligence skill and that, therefore, one might expect to find that the average age of immigrants to a country where a different language is spoken would be less than it would be if they were migrating to a country in which they did not have to learn a new language.[13] Another implication is that in those jobs that require relatively greater fluid intelligence, all other things equal, younger workers will be preferred, and that in those jobs that require relatively greater crystallized intelligence, all other things equal, older workers will be preferred. An example comes from academics where it is said that a mathematician's best work is produced before reaching the age of thirty. Another example is that of the Constitution's requirement that the president of the United States must be at least thirty-five years old.[14] Presumably, part of the reason for that minimal age requirement, although one not articulated in this way by the framers, is that a thirty-five-year-old has some crystallized intelligence, which is, I should think, relatively more valuable in high public office than is fluid intelligence. This distinction will figure prominently in Judge Posner's discussion of employment law and the elderly.

B. Why Do Humans Age?

Judge Posner briefly deals with the question of why we age. The answer, he says, is genetic, but I find his explication of the evolutionary biological reasons for aging to be the least satisfying portion of this otherwise marvelous work. In summary, he holds that senes-

13. He cites GARY S. BECKER, HUMAN CAPITAL: A THEORETICAL AND EMPIRICAL ANALYSIS, WITH SPECIAL REFERENCE TO EDUCATION (3d ed. 1993). Judge Posner also notes that the observation about the average age of immigrants is only approximately true; there are predictable exceptions—as, for example, when older persons immigrate to a new country for familial or religious reasons. POSNER, *supra* note 4, at 69.

14. U.S. CONST. art. II, § 1, cl.4. Article I, § 3 requires that Senators must be at least 30 years old. It is no doubt true that the average age of presidents and senators is far greater than these minima, at least in part because of a societal view that crystallized intelligence is more valuable than fluid intelligence in those offices. *Id.* art. I, § 3, cl.3.

cence is the result of an evolutionary trade-off between the use of a body's limited resources to maintain its physical and mental youth and the use of those resources to further species reproduction, with reproduction eventually winning.[15] This is roughly correct, but there is more to the biology of aging than this. Let me very briefly summarize the literature on this fascinating subject.[16]

Aging is a pervasive phenomenon of life: almost every animal and plant ages and dies. Biologists measure senescence by reference to mortality rates at chronological ages, not by reference to the characteristics that Judge Posner has listed. With respect to humans, a regularity in that relationship is formulated in what is known as the "Gompertz curve."[17] Computing separate Gompertz curves for males and females shows that the mortality rate for males is higher at every chronological age than it is for females. Computing such curves for different human populations reveals differences in the mean life spans for different populations today and, insofar as we have reliable historical data, over time. However, regardless of the differences in those average life spans, there is another regularity in mortality and chronological age (across populations and over time) called the "mortality rate doubling time" (MRDT). For humans the MRDT is constant at eight years.[18] (That is, the mortality rate for humans doubles for every eight years of chronological age.) To take a dramatic example, consider that the risk of death from breast cancer for women in Japan is only one-tenth of what it is in the United States but that the MRDT for women in the two countries is exactly the same.[19] One final regularity: among almost all species there is a relatively constant ratio of maximum life span to MRDT of about fifteen-to-one. So, for humans

15. POSNER, *supra* note 4, at 26-28.

16. I have relied for my information on RICHARD DAWKINS, RIVER OUT OF EDEN: A DARWINIAN VIEW OF LIFE (1995); ROBERT E. RICKLEFS & CALEB E. FINCH, AGING: A NATURAL HISTORY (1995).

17. Benjamin Gompertz was a nineteenth-century British actuary who discovered the relationship between mortality rates and chronological ages that bears his name. The curve is exponential and shows that the log of the mortality rate increases as a linear function of age.

18. RICKLEFS & FINCH, *supra* note 16, at 4.

19. *Id.* at 5. To compare the genetic and environmental influences on mortality and senescence, note that if a Japanese woman moves from Tokyo to Los Angeles, her likelihood of contracting breast cancer increases to the U.S. average for Caucasian women. *Id.* at 138.

the maximum life span is about 120 years, which is fifteen times the human MRDT of eight.[20]

One of the most interesting puzzles for biologists is that of explaining how the phenomenon of senescence—which reduces survival and fecundity, and thereby reduces evolutionary fitness—can result from the process of evolution. How is aging "selected for"? Why is long (even eternal) life *not* selected for?

One possibility is that aging is beneficial to the population, if not to the individual. For example, older people may use fewer resources, leaving more for the young, which is good for the health of the species. But there are two problems with this theory.[21] First, it presupposes that aging already exists, rather than explaining how it evolves. In the absence of aging there would be no reason for the old to make way for the young because they would be just as productive and reproductive as the young. Second, evolution tends to favor outcomes that are beneficial to offspring, not to populations. That is, evolution is likely to favor aging as a method of resource economizing only if the saved resources go to the older person's offspring.

Another theory is that aging may not be evolutionarily beneficial, only neutral. If an organism's reproductive life is shorter than its actual life span, then it is possible that the organism will not start to age until after it has produced all of its offspring. In that circumstance, aging cannot affect evolutionary fitness. Genetic mutations that occur only after an organism's reproductive life has ended do not figure (i.e., are neutral) in natural selection. Of course, this theory requires us to explain why the reproductive span and the organism's life span are not coterminous. One possible answer to that question is that in most species the two spans are identical; they differ for humans only because we have succeeded in extending our actual life span artificially—e.g., by means of cleaner water, better sanitation, medical care, abundant food, and the like. But this answer is not satisfying:

20. In the mid-1930s biologists discovered that a very low-calorie diet extended the maximum life span of rats by 33%. Subsequent experiments have found that low-calorie diets have had similar effects on extending life span (and retarding aging) in many other animals. There is now speculation about whether or not human aging and maximum life span could be similarly affected by low-calorie diets. *See* Richard Weindruch, *Caloric Restriction and Aging*, SCI. AM., Jan. 1996, at 46, 46-52.

21. POSNER, *supra* note 4, at 141.

aging is universal among plants and animals; even natural populations exhibit aging.[22]

There are four evolutionary theories of aging that answer most of the questions just raised:

(1) wear and tear;
(2) wear and repair;
(3) mutation accumulation; and
(4) antagonistic pleiotropy.

These theories are not mutually exclusive.

"Wear and tear" explains aging as the result of the mechanical breakdown of the organism through repeated use. Surely this happens, but it is not the only cause of aging, for two reasons. One reason is that the germ line (eggs and sperm) does not age, which indicates that some cells do not suffer wear and tear, and the other reason is that species with similar physiology suffer the same wear and tear but have very different life spans.[23]

A related but distinct theory is that aging results from the interplay of "wear and repair." True, there is "mechanical senescence" from the repeated and accumulated toil of life, but there are also genetically programmed repair and defense mechanisms. However, "wear" eventually overcomes "repair" because the genetic trade-off favors growth and reproduction over repair and defense.[24]

The next two theories are closely related. Let us first look at the mutation-accumulation theory, developed in the 1950s by Sir Peter Medawar, and then turn to an elaboration of that theory (antagonistic pleiotropy). Genetic effects are switched on at particular points in the life of an organism. Some effects turn on in the embryo; some turn on at puberty; some turn on much later. A relevant example of the latter effect comes from the gene for a disease called Huntington's chorea, an invariably fatal disease whose gene is switched on sometime between the ages of thirty-five and fifty-five. The exact time at which that triggering occurs is determined by the gene's interaction with other genes. Because the Huntington's chorea gene switches on so late, there is ample opportunity for the carrier to pass the gene on to his or her offspring before the disease kills the carrier. Suppose by contrast that the switching-on occurred at age twenty. If that were the case, the gene would be passed on only by those carriers who had

22. *Id.*
23. *Id.* at 142.
24. *Id.* at 146.

children before reaching the age of twenty. Because that would not likely be a large number, the gene would be "selected against" and might eventually disappear. Suppose, finally, that the Huntington's chorea gene were switched on at age ten. In that case it would never be passed on. The obvious conclusion is that genes whose detrimental effects switch on later in life are the only ones that are likely to be passed on to offspring.

The gene for Huntington's chorea is a "lethal" gene; there are others, called "sublethal" genes, that may not themselves cause death but that increase the likelihood of dying from some alternative cause. Medawar's insight was that senescence may represent the result of the accumulation of lethal and sublethal genes whose effects become manifest later in the life cycle because they act on the organism after the reproduction of offspring has occurred and are, therefore, passed on to succeeding generations.[25] In short, "everybody is descended from an unbroken line of ancestors all of whom were at some time in their lives young but many of whom were never old. So, we inherit whatever it takes to be young, but not necessarily whatever it takes to be old. We tend to inherit genes which makes us die a long time after we're born, but not those which make us die a short time after we're born."[26]

An elaboration of the mutation-accumulation theory is that of "antagonistic pleiotropy," attributable to Professor George C. Williams of SUNY-Stony Brook. "Pleiotropic" genes are those that manifest themselves in more than one characteristic. If some of those characteristics are beneficial and others are detrimental, then the pleiotropy is called "antagonistic."[27] Some mutations are likely to have antagonistic pleiotropic effects—some good, some bad. Professor Williams showed that natural selection will favor those mutations with antagonistic pleiotropy if the beneficial effects are realized in youth and the bad effects, in middle or old age.

I have taken some time to lay out these theories of why we (and all other species) age and die because I think that one ought to bear these theories in mind as one reads Judge Posner on aging and old age. One does not want to oversell the value of economics in explaining the elderly; nor does one want to slight the influence of genes.

25. DAWKINS, *supra* note 16, at 129.
26. *Id.* at 131.
27. RICKLEFS & FINCH, *supra* note 16, at 144.

Although both are important, my sense is that Judge Posner has given slightly less weight to genetics than it deserves. Indeed, a fuller account of the elderly than I am able to give would perhaps explain the appropriate interplay between the self-directed, conscious, rational control of the behavior of the elderly and the unconscious, genetic control of their behavior.

C. A Statistical Picture of Aging and Old Age

Over the last fifty years, there have been important changes in the demographics of the elderly.[28] One is a secular increase in the percentage of the total population made up of persons sixty-five years old or older. For the entire world, this percentage has increased from 5.1% in 1950 to 6.2% in 1990 and is expected to increase still further to 8.7% by 2020. If we decompose the world into developed- and less-developed countries, the trend is observable in both groups but with a striking difference. For the less-developed countries the proportion of the population sixty-five or older rose from 3.8% to 4.5% between 1950 and 1990 and will continue to rise to 7.0% in 2020. For the developed countries, the comparable (generally higher) figures are 7.6% in 1950, 12.1% in 1990, and 17.4% in 2020. For the United States, the figures are marginally higher than those for all developed countries: 8.1% in 1950, 12.6% in 1990, and 17.5% in 2020.[29]

There is an even more dramatic increase in the percentage of the population that is aged eighty or older. Taking the United States as an example of a trend that is observable worldwide, we see that in 1950 that percentage was 1.1%; in 1990 it was 2.8%; and in 2020 it is expected to reach 3.9%.[30]

The reasons for these increases in the percentage of the elderly in the world population are rising real incomes (with which life expectancy is positively correlated), better health care,[31] and a decline in the birth rate.

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28. For a more comprehensive picture, see DEMOGRAPHY OF AGING (Linda G. Martin & Samuel H. Preston eds., 1994). I am grateful to Karen Foote for drawing this important collection to my attention.

29. POSNER, *supra* note 4, at 35, tbl. 2.1.

30. *Id.* at tbl. 2.2.

31. Consider that in 1979 there were an estimated 130,000 open-heart coronary bypass operations and that in 1992 there were 480,000. Consider also that in 1968 there were 23 heart transplants in the United States; in 1993, there were about 2300. AMERICAN HEART ASS'N, HEART AND STROKE FACTS, 1995 STATISTICAL SUPPLEMENT 21 (1995).

What about the economic status of the elderly in the United States? In 1960 those aged sixty-five or older were the poorest group in society. By the mid-1990s they were the group least likely to be poor.[32] Judge Posner points out that between 1957 and 1990, the real median incomes of those sixty-five or older more than doubled, an increase that was far greater than that for the country as a whole.[33] The result was that in 1991 only 12.4% of the elderly were poor, compared to 14.2% for the population as a whole.

III. An Economic Theory of Aging and Old Age

The novelty of Judge Posner's approach (and its power, he believes) lies in its use of microeconomic theory to look at aging and the aged. Microeconomic theory may not be familiar to the readers of this *Journal*. Because that theory figures so prominently in Judge Posner's analysis, let me give a very brief overview. I shall then show how Judge Posner uses some elements of that theory to explain the behavior of the elderly.

A. Rational Choice Theory: Market and Nonmarket Behavior

Microeconomic theory offers a model of human decision making, principally, but not exclusively, of behavior in the marketplace. The theory is starkly simple: people are rationally self-interested decision makers; they are capable of computing the costs and benefits of the various alternatives open to them; and they seek to choose that alternative that is likely to give them the greatest happiness. This theory of human decision making is called "rational choice theory."[34]

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32. In 1960, the government classified approximately 20% of the elderly as poor. The U.S. Bureau of the Census classified 12.9% of adults aged 65 and older as poor in 1992. Adults aged 18 to 64 had a poverty rate of 11.7%. However, a special panel (Panel on Poverty and Family Assistance: Concepts, Information Needs, and Measurement Methods) convened by the National Research Council of the National Academy of Sciences to reexamine the official measures of poverty has suggested some changes that put the situation of the elderly in a different light. According to the new measure proposed by the Panel, the poverty rate in 1992 among those aged 65 and older would be 10.8%; that among those aged 18 to 64 would be 12.2%. MEASURING POVERTY: A NEW APPROACH 75 tbl. 1.6 (Constance F. Citro & Robert T. Michael eds., 1990).

33. POSNER, *supra* note 4, at 42. This figure for the doubling of older Americans' income ignores the value of Medicare, which began in 1965. Nor does the figure impute a value to leisure, which the elderly have in greater abundance than most other groups in society.

34. Some critics of rational choice theory contend that the simplifications that the theory makes of the extremely complex process of human decision making are

The great strength of rational choice theory lies in its ability to explain market behavior. For example, the theory makes testable predictions about how consumers choose which goods and services to buy and in what amounts, and how consumers' choices are likely to be affected by changes in market prices, increases in consumer income, the introduction of new, competing products, the change in the price of a complementary good or service, and the like. In a similar fashion, rational choice theory offers testable explanations and predictions of behavior by individuals in their roles as the suppliers of labor and other productive resources. It also offers an account of the market behavior of firms (their decisions about what to produce, how to produce it, how much of it to produce, what price to charge, and the like) and of governmental bodies (what goods and services to provide and in what quantities, how much to charge for those services, and the like). There is widespread agreement among economists about the usefulness of microeconomic theory in explaining individual and corporate behavior in the marketplace.[35]

One of the important innovations of microeconomics in the last quarter-century has been its application to human decision making in *nonmarket* settings. For example, there are insightful economic theories of the family,[36] of legal rules and institutions,[37] and of sexual behavior.[38] These theories purport to show how rationally self-interested actors choose, among other things, spouses and how many children to bear; how to structure the rules for enforcing contractual promises and what remedies to give innocent parties to a breach so as to induce efficient contractual behavior; and how and when to regulate sexual behavior. In addition, some scholars in social science disciplines contiguous to economics, such as political science and

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so seriously misleading that one ought to be extremely cautious about premising accounts of human behavior on the theory. For an evaluation of these criticisms, see generally Thomas S. Ulen, *Rational Choice and the Economic Analysis of Law*, 19 L. & SOC. INQ. 487 (1994).

35. There are, of course, controversies among economists about aspects of the theory, but there is far less controversy than popular jibes would have one believe ("If all the economists in the world were laid end to end, they wouldn't reach a conclusion.").

36. *See, e.g.*, GARY BECKER, A TREATISE ON THE FAMILY (2d ed. 1991); *see also* Professor Becker's address on winning the Nobel Memorial Prize in Economic Science, *The Economic Way of Looking at Behavior*, 101 J. POL. ECON. 385 (1993).

37. *See, e.g.*, ROBERT D. COOTER & THOMAS S. ULEN, LAW AND ECONOMICS (2d ed. 1996); RICHARD A. POSNER, ECONOMIC ANALYSIS OF THE LAW (4th ed. 1992).

38. *See* RICHARD A. POSNER, SEX AND REASON (1992).

sociology, now routinely use rational choice theory to examine the subject matter with which their disciplines are concerned.[39]

There is not the same widespread consensus about the value of these applications of microeconomic theory to nonmarket behavior as there is about its application to market behavior. In part, this is due to the fact that the innovations are so novel that they have not had the time to develop theoretically, to receive empirical confirmation or refutation, and to command institutional and individual loyalty that scholarly innovations ultimately need, if they are to be accepted. It would be rash to suggest that all of the innovations will survive the next fifty years, but surely some of them will.

Judge Posner's use of economic theory to examine the behavior of the elderly is an example of the use of economics to examine nonmarket behavior. To the extent that *any* use of economics to examine nonmarket behavior is controversial, so is Judge Posner's. But, as we shall see, his theory is not heavily dependent on potentially controversial economic theory in nonmarket settings, and, therefore, his conclusions do not depend on a correct reading of arcane economic theory.

B. Economic Theory as Applied to Aging

Judge Posner uses only a handful of economic concepts to examine aging and old age.[40] One is the theory of human capital. Another is the theory of the time-consistency of preferences, which is sometimes called the problem of "multiple selves." These are readily accessible concepts, and they do, in fact, play an important part in Judge Posner's subsequent analysis. I shall explain them briefly and show how they are relevant to the discussion of issues relating to the elderly.

1. HUMAN CAPITAL THEORY AND AGING

"Human capital" is the expression that economists use to describe the income-generating skills that people acquire and that gener-

39. *See, e.g.*, PETER ORDESHOOK, GAME THEORY AND POLITICAL THEORY: AN INTRODUCTION (1986).

40. I am being slightly selective here. There are other theoretical concepts, from economics and from other disciplines, that Judge Posner uses. And the book includes some attempts to model the behavior of the elderly in terms of equations. But I believe that these other tools, which Judge Posner always clearly and carefully explains, are not as central to his argument as are the two concepts that I consider in this section.

ate returns to the capital holder in the same way that physical capital does. Also, as with physical capital, human capital formation occurs over time in distinct phases: a phase during which the capital is acquired, a phase during which the investment pays a return, and then a final phase during which the capital depreciates. Consider the decision to attend law school. Economists imagine that the prospective student takes account of two costs that he or she will have to incur to attend law school: the direct costs of tuition and fees, travel, books, and so on, and the indirect costs of the lost income that he or she could have had during the three years of a U.S. legal education. Why would a student incur these costs? The answer is that the skills acquired in law school will constitute a capital that will earn the student a greater income upon successful completion of his or her studies than he or she could expect by not attending law school.

How does this theory apply to aging and old age? Only in a limited way. Judge Posner points out that the older a person is, the less likely he or she is to invest in human capital formation. The reason is that there simply is not enough time for the investment to pay a return.[41] This obviously applies to job-related skill acquisition, but Judge Posner contends that it also applies to the formation of new friendships: older people are less likely to incur the costs of investing in a new relationship because there is not enough time for the friendship to yield dividends.[42]

There certainly is something valuable in the application of human capital theory to the issue of older employees, as we shall see, but I am much more skeptical of its worth in explaining friendship formation among the elderly. My children's belief that I am ancient notwithstanding, I do not know what it is like to be old, but I much doubt that decisions to form acquaintanceships at an advanced age are really strongly influenced by considerations like those of human capital theory. There are other factors that strike me as much more important in that decision, such factors as where one happens to live (whether in a retirement community or alone, in a town where one has long lived or in a new locality, near one's children and grandchildren), whether one is married or not, whether one is active in clubs or other informal groups, and, of course, one's personal tastes.

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41. We shall see the implications of this observation for issues of employment law in section IV.B below.

42. POSNER, *supra* note 4, at 61-65.

2. THE PROBLEM OF "MULTIPLE SELVES"

Economists have long recognized that human beings may have a systematic problem in making consistent decisions over time.[43] For example, some people may give great weight in their calculations of pleasure and pain to the present and relatively little weight to possible future cost—as in the decision to smoke cigarettes today despite the cost of bad health in the future. This goes beyond a mere matter of taste: it could be perfectly rational to calculate that the pleasure of a current smoke is worth the cost in future ills. Nevertheless, much of the empirical literature on the time-consistency of preferences finds that decisions about maximization over time are *not* rational in this way. The typical pattern is to favor the present over the future and, very importantly, to discount and ignore information that seeks to bring the future more clearly into current calculations.[44] This last point indicates that the correction of the time-inconsistency of preferences is not just a matter of providing decision makers with the right information: they will ignore or distort it. Economists have seen the problem of the time-consistency of preferences at the root of such issues as addiction[45] and criminal behavior.[46]

Philosophers know the problem of the time-consistency of preferences as the problem of "multiple selves." The issue is frequently raised in relation to discussions of personal identity: "In what sense am I the same person as I was five years ago?" "In what sense will I be, twenty years hence, the same person as the person I am now?"[47]

The application of the problem of multiple selves to issues affecting the elderly is straightforward.[48] Consider the issue of what are called "advance directives"—instructions drawn up today but meant to govern some future event involving the drawer. Suppose that a younger person would like very much to avoid a slow, painful death in old age or the humiliation of senile dementia or Alzheimer's dis-

43. The literature begins with Robert Strotz, *Myopia and Inconsistency in Dynamic Utility Maximization*, 23 REV. ECON. STUD. 165 (1955-56).

44. I review the extensive psychological and economic literature on time consistency of preferences in Ulen, *supra* note 34, at 487.

45. *See* Gary Becker & Kevin Murphy, *A Theory of Rational Addiction*, 96 J. POL. ECON. 675 (1988); Alan Schwartz, *Views of Addiction and the Duty to Warn*, 75 VA. L. REV. 509 (1989).

46. *See, e.g.*, James Q. Wilson & Alan Abrahamse, *Does Crime Pay?*, 9 CRIM. JUS. Q. 359 (1992).

47. Jeff McMahan introduced me to the philosophical literature on personal identity. *See* DEREK PARFIT, REASONS AND PERSONS (1984).

48. POSNER, *supra* note 4, at 84-95.

ease. So, as a young person, he or she draws up instructions about what should be done to his or her older self if any of those conditions should afflict him or her—e.g., instructions that medical care and even food and water should be withheld from his or her older self, if certain conditions hold. Now suppose that many years later the conditions come to pass and that now-older person insists on receiving medical care and food and water. Should the wishes of the younger self or those of the older self be honored? This is an extremely difficult question.[49]

Another application of the multiple-selves problem to the issues of the elderly has to do with one's saving some current income for retirement. Do people systematically undersave because their future selves seem as unlikely a recipient of voluntarily redistributed funds as would another person? And if this is a common failing, is it not a justification for a forced savings plan like Social Security? In the absence of legal compulsion to forego some current consumption so as to save for the future, society might be saddled with financial responsibility for many poor elderly people. Indeed, the situation could be made worse by moral hazard, as would be the case if the existence of a social safety net for the elderly would induce youthful profligacy.

We shall see the multiple-selves problem as a central issue in legal problems of the elderly.

C. An Economic Theory of the Behavior of the Elderly

The second section of Judge Posner's book looks at the behavior of the elderly through the lens of economic theory—specifically, human capital theory, the "last period" problem,[50] and the problem of "multiple selves." The focus is on certain psychological characteristics of the elderly. Although these characteristics are established in the gerontological literature, Judge Posner gives a plausible, but often not

49. My colleague Richard Kaplan quite rightly points out that advance directives only apply to physical disabilities and only if the patient is incompetent. As a result, the example of a competent older person disavowing a directive he made when younger presents no vexing legal issue.

50. In a game (i.e., a situation in which strategic behavior counts) that is repeated again and again, it is frequently the case that, so long as none of the players knows when the game will be played for the final time, the game will go along in a cooperative fashion, but that, when the players know that the game will be played for the final time, this cooperative behavior begins to "unravel" so that the players stop cooperating at a much earlier stage of play. Judge Posner analogizes the announcement of this final play or "last period" to the issues that become foremost in the minds of the elderly because of the proximity of death. POSNER, *supra* note 4, at 58-61.

particularly economic, explanation for these characteristics. The result will disappoint those who insist on an economic explanation for all human behavior, but it will please others who appreciate noneconomic and economic explanations of a vast amount of fascinating material.

As an example of Judge Posner's willingness *not* to be bound by economics, consider his explanation of the fact that the elderly seem to be more pessimistic than those who are younger. Why? I do not find anything related to economic theory invoked (or invocable) to explain this fact. Judge Posner simply says that the elderly are pessimistic because they have experienced much more than have the young; they have seen many changes and have recognized the ephemerality of the things they have seen changed, and they are more conscious of the changes that were for the worse than they are of those that were for the better.[51]

He also discusses the dread of death among the elderly, religious beliefs, the loquacity of the elderly,[52] the question of whether or not older drivers have more accidents (they drive much less and have a higher accident rate than all but the youngest drivers),[53] suicide among the elderly,[54] sex,[55] the residential preferences of the old,[56] and the voting behavior and willingness to serve on juries of the elderly.[57] There is an entire chapter on the relationship between age, creativity, and productivity[58] that contains a fascinating theory about the difference in the ages at which certain occupations elicit peak performances from their practitioners and about the duration of such peak performances—does it go on for a long time or a short time after the peak has been reached? Also, there is a superb chapter on "Adjudication and Old Age,"[59] in which Judge Posner explores the "nation's premier geriatric profession."[60] He finds that, while there is the inevitable falling off in the quality of work, it happens very late in the career of an

51. *Id.* at 107.
52. *Id.* at 119.
53. *Id.* at 122-26.
54. *Id.* at 133-37. I shall discuss the legal issues raised by euthanasia and geronticide below. *See infra* text accompanying notes 63-71.
55. POSNER, *supra* note 4, at 138-41.
56. *Id.* at 145-48. It is curious to me that Judge Posner discusses this issue without once mentioning the desire of the elderly to move to warmer climates, either permanently or for the winter.
57. *Id.* at 148-55.
58. *Id.* at 156-79.
59. *Id.* at 180-201.
60. *Id.* at 180.

appellate judge and, indeed, that appellate federal judges remain remarkably productive at advanced ages.

I commend all this material in the second section, with the cautionary note that the eminent good sense here is not leavened with (nor knead[61] it be) with economic theory. The quantitative work is interesting; the insights are arresting; and the explanations are delicately textured and nuanced.

IV. The Legal Implications of the Economic Theory of Aging and Old Age[62]

With these preliminaries out of the way, we may now turn to the third section of Judge Posner's work—the investigation of the legal issues of old age, such as suicide among the elderly and employment problems and the elderly, in light of economic and other theories. This is, in my view, the most satisfying and engaging part of the book. The sparkling insights and sometimes lyrical writing of the first two sections here give way to solid, workman-like, polished and handsome legal argumentation. Judge Posner takes on difficult and timely legal and public policy issues facing the elderly; his discussions of them are superb.

A. Suicide Among the Elderly

Age-specific suicide rates in the United States have always been consistently highest among older people. However, the overall suicide rate for persons aged sixty-five years and older declined from the 1940s, when statistics were first systematically collected, till the 1980s. But from 1980 to 1992 (the latest date for which figures are available) the suicide rate of those sixty-five years old or older rose. During that most recent period suicide rates have risen for only two groups in the United States: those aged five to nineteen years old and those aged sixty-five years or older. Recall that in 1992 persons sixty-five years old or older made up thirteen percent of the population. That same group accounted for almost twenty percent of all suicides.[63]

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61. I could not resist.

62. For a general introduction to the legal issues of older persons, see LAWRENCE A. FROLIK & RICHARD L. KAPLAN, ELDER LAW (1995).

63. Centers for Disease Control, *Morbidity & Mortality Wkly. Rep.*, Jan. 12, 1996, *available at* http://www.cdc.gov/epo/mmwr/mmwr.html.

The particular problem with which Judge Posner deals in his chapter on euthanasia and "geronticide" is that of physician-assisted suicide for the terminally ill elderly. Generally, that practice is illegal in the United States and in other countries. A notable exception to this general prohibition occurs in the Netherlands, where voluntary euthanasia has been legal since the early 1970s. Such empirical evidence as we have on the effects of physician-assisted suicide comes from the extensive studies of that country's experience.[64]

Several states in the United States are thinking of legalizing physician-assisted suicide. In a November 1994 referendum Oregon became the first state to do so.[65] That law authorizes physicians to prescribe "suicide pills" to patients expected to live no more than six months. But that limitation is problematic in that it may exclude an important group who would like to commit suicide: those who are expected to live more than six months but with severe pain or at some other intolerable cost. Nevada and South Carolina are both contemplating bills like Oregon's.[66]

Judge Posner uses economic theory to great effect in sorting out this issue and, in the end, comes down in favor of the legality of carefully regulated physician-assisted suicide. The thrust of his analysis is that for some *rational* elderly persons the benefits of suicide exceed the costs. Society ought to allow physicians—under careful monitoring—to assist in those suicides for which it can specify the conditions under which the benefits of suicide to the individual and to others *clearly* outweigh the costs to that person, to society, and to prospective patients. The bulk of the chapter is an investigation of these costs, benefits, and conditions.

There are three central points in the argument. First, suicide may be a rational way for some terminally ill patients to die with dignity and in avoidance of extreme pain. Judge Posner says that, popular conceptions to the contrary notwithstanding, dying is not generally a peaceful act, but rather, one characterized by pain, confu-

64. *See* John Griffiths, *Recent Developments in the Netherlands Concerning Euthanasia and Other Medical Behavior that Shortens Life*, 1 MED. L. INT'L 347 (1995); G.K. Kimsa & E. van Leeuwen, *Dutch Euthanasia: Background, Practice, and Present Justifications*, 2 CAMBRIDGE Q. HEALTHCARE ETHICS 19 (1993).

65. 1995 Or. Laws ch. 3, Initiative Measure No. 16. The law was to take effect on January 1, 1995, but has been delayed by a court challenge. For background on the Oregon referendum, *see* George J. Annas, *Death by Prescription*, 331 NEW ENG. J. MED. 1240 (1994).

66. *See* 1995 Nev. Stat. 532; 1994 S.C. Acts 485.

sion, and fear.[67] This is the *general* case, he asserts, and by implication he argues that the quantum of pain, confusion, and fear for the terminally ill is even greater. Other things equal, they ought to be allowed to avoid this at reasonable cost.

Second, Judge Posner suggests that for the terminally ill, the benefits of choosing a dignified death before their final weeks are so much greater than the costs that they may want to commit suicide whether it is legal or not. Physician-assisted suicide will generally be less costly to the patient, taking into account all costs, than other forms of suicide.[68] Moreover, allowing patients the option to have a physician assist in the suicide may, curiously, induce patients to wait longer into their terminal condition before committing the act. This is because, if physician assistance is illegal, some terminally ill patients may recognize that they will shortly become incapable of committing suicide themselves, and may, therefore, decide to kill themselves sooner than they would if a physician could legally assist them. Indeed, Judge Posner suggests that allowing physician-assisted suicide might even *reduce* the number of suicides among the elderly, which, as we have seen, are on the increase.[69]

Third, a frequent criticism of physician-assisted suicide is that, if it is made legal, the line between a physician's helping a patient to fulfill his or her wish to die and the physician's hurrying a patient to his or her death will be unavoidably blurred. The results might include an increase in contentious litigation about whether or not the physician overstepped his or her bounds, and an increase in the casual taking of life from elderly patients. Judge Posner very much doubts these dire outcomes, and I agree with him. Physicians' canons of good conduct, both formal and informal, run strongly against these callous outcomes. Moreover, the evidence from the Dutch experience with physician-assisted suicide suggests that fears of this kind are unfounded. Finally, if we still fear physician misconduct, we can deal with that by imposing regulations on the process leading to the decision to take one's life. Among such regulations might be those necessitating that the patient's request be witnessed and in writing, that the physician report his or her participation to a hospital committee, and

67. POSNER, *supra* note 4, at 109; *see also* SHELDON NULAND, HOW WE DIE (1993).

68. POSNER, *supra* note 4, at 248.

69. *Id.* at 244.

that he or she consult with a certified specialist in the ethics of dealing with dying patients.[70]

Judge Posner is not willing to go further than this in his argument for physician-assisted suicide. He does not, for instance, believe that the right to physician-assisted suicide should be so broadly construed as to allow the enforceability of an advance directive instructing another to assist in suicide by, say, withholding food and water if the directive giver should become senile. The multiple-selves problem makes the morality of such an allowance too opaque to permit Judge Posner to embrace it.

Finally, as regards carefully regulated physician-assisted suicide, Judge Posner believes that the implementation of this legal innovation should take place at the state level, not the federal level.[71] He argues that there is enough moral heterogeneity among the states to make it certain that no one policy toward physician-assisted suicide will be acceptable in *all* of them. Although I recognize the force of this point and generally agree with it, I think that this matter deserves further thought. Consider, for example, the issue of residency requirements. If the legality of physician-assisted suicide is left entirely to the states, then what constraints, if any, will the states impose on (or constitutionally be allowed to impose on) those who seek to come to their state to die with the help of that state's licensed physicians?

Perhaps these and other implementation matters are amenable to simple solutions, but I am doubtful. Be that as it may, I think the tide is running, and ought to run, in favor of the legality of carefully regulated physician-assisted suicide. No better statement of the case for that legality is likely to be found than Judge Posner's.

B. Employment Law and the Elderly

Legal attempts to discourage discrimination against older workers receive an entire chapter in *Aging and Old Age*. And in another chapter, Judge Posner deals with a related employment issue—retirement income. The spirit of the two treatments is the same: that the law has mistakenly intervened in an area of private decision making and that the results of those interventions are social inefficiencies. I shall deal first with issues of pension law and then turn to issues of age discrimination, including mandatory retirement.

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70. *Id.* at 243 (citing Franklin G. Miller et al., *Regulating Physician-Assisted Death*, 331 NEW ENG. J. MED. 119 (1994)).

71. *Id.* at 260.

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67. POSNER, *supra* note 4, at 109; *see also* SHELDON NULAND, HOW WE DIE (1993).

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70. *Id.* at 243 (citing Franklin G. Miller et al., *Regulating Physician-Assisted Death*, 331 NEW ENG. J. MED. 119 (1994)).
71. *Id.* at 260.

1. PENSION LAW[72]

Today employees expect and, in many cases, receive a promise of retirement income as one of the terms of employment. But this is a relatively recent development. Employers first proposed pension plans (actually deferred profit-sharing plans) in the late nineteenth century.[73] Their popularity grew, so that by the 1920s private pension plans covered about twenty-five percent of the labor force. During the Great Depression most of these plans in this country disappeared. Private pension plans were revived during World War II because contributions to employee retirement funds were exempt from wartime wage controls.[74] After the War, private retirement-income plans began a period of secular growth that continued, with one interruption, to today. By the mid-1950s they covered over twenty-two percent of the labor force. By 1970 the proportion was up to forty-six percent. Then, in the 1980s, there was a ten percent reduction in the retirement-income coverage of workers. That decline was temporary, so that by the mid-1990s approximately half of the labor force is covered by private pension plans.[75] Finally, consider the 1990 distribution of expenditures by public and private retirement and other programs that give income and other aid to retired persons:[76]

Type of Program	*Amount (in billions)*	*Percent of Total Expenditures*
Medicare	$106.8	19
Social Security	223.0	39
Federal Employee Pensions	53.9	9
State and Local Govt.	39.2	7
Private Pensions	141.2	25
		100

Prior to 1974, the conditions under which an employee received retirement income were matters for private agreement. To the extent

72. A very useful summary of the law of postemployment benefits, including background information, may be found in MATTHEW W. FINKIN ET AL., LEGAL PROTECTION FOR THE INDIVIDUAL EMPLOYEE 762-859 (1989).

73. *Id.* at 764.

74. *Id.* at 765.

75. *Id.* at 64-65. There are some other interesting facts about pension plans. Employers have paid an increasing percentage of their total payrolls into pension plans; the figure rose from 1.7% of total payrolls in 1950 to 6.7% in 1980. *Id.* at 765. The Federal Reserve estimated the value of assets held by all private pension funds in 1992 to be $3.2 trillion. Ninety percent of all persons aged 65 years or older received Social Security retirement payments in 1990; about 44% received additional retirement benefits from some other public or private pension plan. *Id.* at 763-64.

76. FINKIN ET AL., *supra* note 72, at 782.

that the law intervened in these agreements, it did so as labor law and contract law allowed.[77] In 1974 Congress passed the Employees Retirement Income Security Act (ERISA).[78] The Act not only regulates certain terms of pensions,[79] but also regulates employee health and welfare benefits, establishes a federal forum in which to litigate pension-related disputes, and creates the Pension Benefit Guaranty Corporation, which, like the Federal Deposit Insurance Corporation, is a federally administered insurance plan to protect employees from losses that might result from their employers' underfunding their pension obligations.

The principal motivation for the passage of ERISA was a congressional desire to protect employees from exploitation. There were two fears that the legislation addressed. First, employers, it was said, had an inherent bargaining advantage over individual employees and would structure terms for the payment of retirement income that would be shaded toward the interests of the employers. Federal legislation, by protecting employee interests, could level the scales. Second, in respect of those employees protected by a collective-

77. As he does throughout the book, Judge Posner gives extensive and very useful references to the literature on this topic.

78. 29 U.S.C. §§ 1001-1461 (1994).

79. The principal regulations were one requiring the vesting of pension rights in defined-contribution plans after five years of participation (originally, 10 years) and another limiting pension "backloading" in defined-benefit plans. "Backloading" refers to the practice of making the value of the pension payouts so age-dependent that the value of the retirement package is very low until the eve of retirement. Another important objective of ERISA was that of limiting employer underfunding of private pensions. *See infra* text accompanying note 80.

Retirement plans come in one of two forms: the defined-benefit and the defined-contribution plan. In a "defined-benefit" plan, the retiree's annual retirement income is some function of his income in the last few years of his employment and of the total number of years of his service. Typically, the higher the terminal salary and the greater the number of years of service to the employer, the greater the percentage of the terminal salary to which the retiree is entitled. In a "defined-contribution" plan, the employer and the employee make contributions to a retirement fund during the years of service. The fund invests those contributions so that when the employee retires, she is entitled to the accrued contributions plus interest or investment returns.

The economics of these two forms of pension are a fascinating subject. For example, the two forms differ importantly in how they assign the risk of nonperformance of the retirement-income fund. Under a defined-benefit plan the employer or the fund bears the risk of nonperformance. That is, the employee has the entitlement to the contractually specified benefit, regardless of the performance of the fund during the years of her service. Under the defined-contribution plan the employee bears the risk of nonperformance of the fund.

Congress thought the principal problem with private pensions prior to 1974 was in defined-benefits plans. As a result, ERISA is principally concerned with such plans and not with defined-contribution plans.

bargaining agreement whose pension provisions were not unduly advantageous to employers, there seemed to be an almost irresistible incentive for the employer to underfund the pension or to take money from the pension fund for other purposes.[80] Regulation would help to protect employees from disappointment in the realization of their pension income because of employer (or labor union) misconduct.

Judge Posner's view of ERISA is that it was not necessary and that it has not had the desired effects. Take, first, the justification for statutory federal regulation of pensions. Judge Posner finds that justification to have been unclear, at best. He contends that the most frequently given justification for regulation—to encourage saving by young workers—was only marginally relevant. As we have already seen, young workers might not have sufficient regard for their future selves and might not, absent legal compulsion, defer present consumption and save enough for future consumption. To minimize the likelihood of undersaving and the need for public support of the elderly, the law could enlist private employers to further the social goal of saving for retirement by regulating private pension agreements. Judge Posner points out that the problem with this justification is that there is very little in ERISA that seems directed at this goal.[81]

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80. Some believe that these behaviors continue in 401(k) plans and have called for reform to control employer misconduct. The 401(k) program began in 1979 and has amassed a total of $525 billion in assets since then. Under current regulations employers have up to 90 days from the time that they withhold 401(k) funds from an employee's compensation until they must deposit the money with the fund's investment plan. Some companies that are financially hard-pressed, most of which are small and medium-sized, have violated this limit, and in some cases the company has filed for bankruptcy without ever having paid the money owed to the 401(k) plan. See John Greenwald, *Is Your 401(k) at Risk?*, TIME, Dec. 11, 1995, at 66-67. In response the Department of Labor announced its intention in December 1995 to reduce the time limit on the employer's duty to deposit 401(k) funds. The new limits took effect in March 1996. They will range from one day to one month, depending on the size of the firm. The Profit-Sharing/401(k) Council of America called the regulation premature, saying that the vast majority of 401(k) plans are financially sound and that only one-quarter of one percent of all 401(k) plans are under investigation by the Department of Labor. *401(k) Savings Safeguards for Workers Are Outlined*, N.Y. TIMES, Dec. 12, 1995, at D2.

81. My colleague Richard Kaplan argues that ERISA was, indeed, part of a comprehensive plan to encourage worker saving. The tax code treats pension contributions more favorably than wage income to induce workers to accept deferred compensation. ERISA, Kaplan argues, was a means of assuring workers that the trade-off was one worth making because their deferred compensation would really be there. Clearly, there is a factual dispute between Judge Posner and Professor Kaplan about the extent to which employers were not keeping their bargain with employees in respect to pension income.

In contrast to this older justification for the regulation of private pensions, a more modern conception begins from the premise that pensions are in the mutual interest of employers and employees and that the law ought to try to correct for any imperfections in the ability of those parties to order their relationship for mutual advantage. Judge Posner argues that regulation of pensions was unnecessary because prior to 1974 the consensual market for employee retirement income was working reasonably well.[82] There were few or no imperfections. He does not say this explicitly, but he would probably argue that there are many plausible economic explanations of the fact that the pre-1974 pension market worked reasonably well. First, the employment market was sufficiently competitive to ensure that the terms and conditions for voluntary retirement agreements would have been efficient. Second, the legal protections of pensions for employees in contract and other areas of the law were already adequate to the deterrence of most, if not all, abuses.[83]

Turning to the issue of ERISA's desired effects, Judge Posner shows that ERISA's social benefits have been modest. First, the legislation has made defined-benefit plans less risky to employees and more costly to employers, but whether these benefits and costs net out to a positive or negative benefit is not clear.[84] Second, ERISA has not reduced the amount of backloading in defined-benefit pension plans.[85]

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82. *See* POSNER, *supra* note 4, at 304.

83. *Id.* Judge Posner says that the legislative history of ERISA suggests that the principal problems with private pensions arose from multi-employer pension plans administered by labor unions.

84. There are difficulties in anyone's trying to establish the actual net benefits or costs of ERISA. One of those difficulties is that since the early 1970s defined-contribution plans (in which employers make tax-deferred contributions to a retirement account on an employee's behalf, as in 401(k) plans) have been growing faster than defined-benefit plans. Another is that since the early 1970s interest rates have generally been higher than before that date so that the tax benefits to a corporation of overfunding its pension liabilities may have increased at the same time that, coincidentally, federal legislation made underfunding of pension plans far less attractive. That is, generally higher interest rates would have created a stronger incentive for corporations to do less underfunding of pensions, regardless of ERISA's requirements.

85. *See, e.g.*, LAURENCE J. KOTLIKOFF & DAVID A. WISE, THE WAGE CARROT AND THE PENSION STICK: RETIREMENT BENEFITS AND LABOR FORCE PARTICIPATION (1989); Daniel Fischel & John J. Langbein, *ERISA's Fundamental Contradiction: The Exclusive Benefit Rule*, 55 U. CHI. L. REV. 1105 (1988).

2. AGE DISCRIMINATION IN EMPLOYMENT

In 1967 Congress passed the Age Discrimination in Employment Act (ADEA)[86] to protect older employees from involuntary termination and other employment discrimination due to age. The Act originally provided protection for workers between the ages of forty and sixty-five, leaving intact the prevailing practice of mandatory retirement at age sixty-five. In 1976 Congress amended the Act to allow mandatory retirement at age seventy and then again in 1986 to forbid mandatory retirement at any age. Judge Posner is opposed to the ADEA[87] and is convinced that the benefits of forbidding mandatory retirement are greatly exaggerated.

a. Age Discrimination[88] Judge Posner does not believe that age discrimination in employment is a serious problem. Therefore, he argues, there is little, if any, warrant for attempting to extirpate the practice. Moreover, the particular constraints imposed by the ADEA create inefficiencies and inequities in the employment market.

Why does Judge Posner believe that there is no serious problem with age discrimination in employment? He gives several reasons. One is that labor markets are generally competitive and, therefore, reach rational, defensible results. That is, competitive employment markets will almost certainly *not* systematically undervalue the productivity of older employees. If older workers are as productive, relative to their salaries, as are younger, cheaper workers or machines, they will be retained; if not, they will be let go. If wages were flexible, then, even if the productivity of older workers declined, their wages could decline and they would retain their jobs. Older workers lose their jobs if wages are inflexible downward, given that their abilities decline and that there are more-productive workers available at the going wage.[89]

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86. 29 U.S.C. §§ 621-34 (1994).

87. "The age discrimination law is at once inefficient, regressive, and harmful to the elderly." POSNER, *supra* note 4, at 319.

88. For general background and an economically minded critique, see RICHARD A. EPSTEIN, FORBIDDEN GROUNDS: THE CASE AGAINST EMPLOYMENT DISCRIMINATION LAWS 441-79 (1992).

89. By contrast to this "animus" discrimination, Judge Posner also discusses statistical discrimination against the elderly—namely, the imputation to *all* older workers of lower productivity on the basis of the fact that the *average* productivity of older workers is low. This is a broad issue—and not just with regard to age discrimination. The economics of statistical discrimination are that, if the market is reasonably competitive, then the imputation to an individual of the statistically verifiable characteristics of the class may be a defensible search- or information-

A second reason that Judge Posner gives for not believing that age discrimination is a problem in employment decisions is that those who are making hiring and firing decisions are likely to be at least middle-aged, if not older, people themselves. As a result, their decisions about employing older people are not likely to be decisions tinged with "ageism."

Nonetheless, it is a fact that older workers do have difficulty finding *high-paying* jobs.[90] If the reason for that is not a general prejudice against the elderly, what is it? One is that, for the older employee who has been with an employer for a long time, a large portion of his or her compensation consists of a return on the firm-specific capital that the employee has built up over the years. Only if that capital is not firm-specific but portable (as might be the case with, say, a client list) can the employee reasonably expect an alternative employer to pay a high wage. Moreover, most employers will not be willing to hire older workers if the job requires building up firm-specific capital: there simply will not be a long enough employment period for the employee to justify the investment.[91] These are perfectly rational reasons for "discriminating" against older employees.

These arguments notwithstanding, there *is* an Age Discrimination in Employment Act, and Judge Posner persuasively argues that its results are inefficient, both for the elderly and for society as a whole. His evidence for this contention comes from both a theoretical consideration of the likely effects and a statistical study of hiring and discharge cases brought under the ADEA. As to theory, Judge Posner says that, if the Act is in conflict with what rational profit-maximizing employers want to do and if those employers can subvert the Act through legitimate alternatives, then the effects of the Act will be minimal—consisting principally of an increase to employers in the costs of achieving their desired work force age distribution. An example is the Act's prohibition of mandatory retirement, a subject that I shall deal with in more detail in the next section. Judge Posner argues that, the prohibition notwithstanding, employers can induce retirement at

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cost economizing technique. There are obvious dangers in these imputations, but Judge Posner argues, plausibly, that with respect to the elderly, the benefits of allowing this imputation may outweigh the costs.

90. I stress "high-paying" because there are probably a large number of low- or modest-paying jobs for the elderly.

91. It is probably also true that because of the decline in fluid intelligence with age, a decline stunningly absent in my father's case, it is more expensive to teach older workers new job skills.

certain ages (and thereby achieve any age distribution of their labor force that they desire) by offering early retirement plans.

The ADEA forbids discrimination against those over the age of forty in hiring, promotion and demotion, salary, and firing decisions. The recent statistical studies of age discrimination report two salient findings: (1) the vast majority of ADEA cases are for discrimination in discharge, not for discrimination in hiring,[92] and (2) in all ADEA cases, plaintiffs do relatively poorly, winning slightly more than ten percent of the time.[93] Both points require explanation.

Why should there be so many discharge cases and so few hiring cases under the ADEA? Judge Posner contends that the explanation lies in the damages available to the successful plaintiff in the different sorts of cases. In a hiring discrimination case, the successful plaintiff is likely to recover a sum that is only slightly more than the amount he or she is earning in his or her current job.[94] This is because if the job for which he or she applied pays much more than his or her current job, he or she must demonstrate that he or she was the best-qualified applicant, and that is difficult to prove. By contrast, in a discharge case two factors make the stakes much higher. First, the older employee's current wage may be high because of his or her facility with firm-specific capital. Second, his or her alternative employment opportunities may be few, for reasons explained above. Consequently, the damages may be his or her entire current salary (rather than the difference between his or her current salary and his or her next best alternative employment).[95] Clearly, the incentive to bring a discriminatory discharge action is greater than that to bring a discriminatory hiring action.[96]

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92. The EEOC study of complaints lodged with the Commission found that 87.9% of the age-discrimination complaints involved termination while only 8.6% involved hiring. POSNER, *supra* note 4, at 330 (citing *EEOC News Release*, Jan. 12, 1994, at 4, tbl. 3).

The approximate nine-to-one prevalence of termination over hiring cases in age discrimination cases is also found in cases alleging other categories of discrimination, such as racial discrimination in employment. *See* POSNER, *supra* note 4, at 333 (citing John J. Donohue III & Peter B. Siegelman, *The Changing Nature of Employment Discrimination Litigation*, 43 STAN. L. REV. 983, 1015 (1991)).

93. Judge Posner's sample consists of all reported ADEA cases in which a final decision was rendered between January 1, 1993, and June 30, 1994. *Id.*

94. Under ADEA rules, the amount may be doubled if the discrimination was willful.

95. POSNER, *supra* note 4, at 329.

96. If employers recognize that discriminatory hiring cases are rare but that discriminatory termination cases are relatively frequent, that fact may increase the importance to employers of *not* hiring older workers.

The second salient fact about age discrimination cases that requires explanation is that plaintiffs do so poorly. Why? Two obvious possibilities are that since 1967 (the year in which ADEA became law) employers have genuinely purged their employment patterns of offensive practices and have become more artful at hiding their offensive practices. In either case, one would expect to find a declining rate of plaintiff success since 1967. Another important obstacle to a plaintiff's success is the requirement that he or she must show that an "equally competent but young employee was treated better,"[97] a showing that is extremely difficult in view of the many ways by which competence in employment may be measured. Yet another point that makes plaintiff success difficult is that employers may demonstrate evenhandedness in discharge by firing a younger employee at the same time that they fire an older employee.[98]

b. Mandatory Retirement Generally The 1986 amendment to the ADEA abolished mandatory retirement in most occupations. The issue that Judge Posner addresses is whether this abolition is a good or a bad thing. He first considers the economics of mandatory retirement and then, as he has done previously, applies the analysis to the special cases of the mandatory retirement of judges and professors.

Why should there be mandatory retirement?[99] Judge Posner suggests that the practice may be part of an implicit, mutually beneficial bargain between employers and employees. Employers promise to pay retired workers pension benefits in exchange for the workers' promise to leave employment no later than the designated age. Employers benefit because they would like to replace some older workers with less expensive but equally productive younger workers.[100] Older employees are, presumably, willing to accept a promise of retirement benefits in exchange for their promise to give up their employment at a certain age to save themselves the possible humiliation of involuntarily discharge or wage reduction. The cost to employers of mandatory retirement is that a few productive older workers may be unnecessarily let go. Presumably these costs are less than the benefits; other-

97. POSNER, *supra* note 4, at 336.

98. *Id.* Judge Posner says that it is, at any rate, the prevailing folk wisdom that employers carry out such deliberately "paired" firings.

99. *See* Edward P. Lazear, *Why Is There Mandatory Retirement?*, 87 J. POL. ECON. 126 (1979).

100. Alternatively, employers could keep on the older workers but lower their wages to reflect the reduction in their productivity. This is not feasible.

wise, employers would not favor mandatory retirement plus a pension plan.

Judge Posner finds three general benefits of a rule requiring mandatory retirement. First, it facilitates an individual's and a firm's financial and retirement planning. Locking in the decision about retirement at a certain age solves a multiple-selves problem for the individual and allows the firm to rationalize its personnel practices. Second, the costs to employers of individual assessments of the productivity of older workers are likely to be far greater than the benefits to an employee of that assessment. Employees who are eligible for Social Security benefits have a strong incentive not to work after age sixty-five because the Social Security benefits paid to a recipient who continues to work during the period between his sixty-fifth and seventieth birthday are much less than they would be if he had stopped working at age sixty-five.[101] That means that relatively few workers will find it attractive to continue to work after age sixty-five. To the extent that there are large fixed costs to the employer of assessing individual employee productivity, those costs must be spread over these relatively few older workers. A third factor reducing the employer's incentive to engage in individual employee assessment is that there *is* a significant decline in the productivity of the elderly in many professions. As a result, there is only a short period beyond the age of sixty-five during which the employer may recapture the costs of assessing the productivity of these older employees.[102]

There is some anecdotal evidence in support of Judge Posner's view. Mandatory retirement and widespread pension benefits appeared together and became prevalent in the U.S. economy relatively recently, after World War II. Even so, as recently as 1950, the male life expectancy was below the average age of retirement. The demand for retirement benefits must, therefore, have been modest. But by 1990, male life expectancy exceeded retirement age by about ten years, creating the issue of the nonworking elderly.[103]

Another reason that Judge Posner gives for believing that the move to abolish mandatory retirement is misguided is that there ap-

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101. The worker can also choose *not* to take Social Security benefits at all between his 65th and 70th birthdays. He would then be eligible at age 70 to receive a bonus. *See* FROLIK & KAPLAN, *supra* note 62, at 282-83.

102. POSNER, *supra* note 4, at 324.

103. *Id.* at 36-37. For the discussion of Social Security and health expenditures on the elderly, see *infra* notes 125-26.

pears to be a long-term trend toward retirement at ever-younger ages. Prior to the 1978 amendment to the ADEA that raised the mandatory retirement age from sixty-five to seventy, "only 5 to 10 percent of retired workers had been retired involuntarily."[104] Moreover, after the mandatory retirement age was raised, the labor force participation rate of those over sixty-five years old did not change significantly, although the participation rate for elderly men reached a trough in 1985 from which it has risen slightly.[105]

Another fact that Judge Posner returns to repeatedly is that regardless of the statutory age of mandatory retirement or of its abolition, employers can still achieve their desired age distribution of employees by means of early-retirement offers and changes in the burden of work (and other conditions of employment) that they assign to older workers. The abolition of mandatory retirement only succeeds in raising the costs to employers of achieving this desired age distribution of their work force through other means.

c. Mandatory Retirement for Judges and Professors Judge Posner's earlier examination of the productivity of older workers generally and of federal judges particularly suggested that for some jobs the elderly might perform just as well as, if not better than, the young. Two jobs for which this might well be true are judges and those in academic disciplines. That is, the abolition of mandatory retirement for those two professions might be efficient. Judge Posner is not prepared to go so far. He notes that there are methods within the system of senior status in the federal judiciary that guard against incompetent judging.

As to professors, he notes that fluid intelligence is more important in doing research than it is in judging and that, consequently, the age-related decline in productivity is likely to be greater among professors than it is among judges. This is especially true for academics at the elite universities where research is an important component of what professors do. Most commentators, therefore, suggest that the impact of mandatory retirement will be greatest on the elite research universities. There the burden of carrying an older professoriat will

104. POSNER, *supra* note 4, at 349 (citing Philip L. Rones, *The Retirement Decision: A Question of Opportunity?*, MONTHLY LAB. REV., Nov. 1980, at 14, 15).

105. *Id.* (citing Edward Lawlor, *The Impact of Age Discrimination Legislation on the Labor Force Participation of Aged Men: A Time-Series Analysis*, 10 EVALUATION REV. 794 (1986)).

be greatest, and one can predict that the likely response will be a blossoming of early-retirement plans for aging professors.[106]

Judge Posner speculates that the abolition of mandatory retirement in our best universities may also create pressure to abolish tenure.[107] As we have just seen, the abolition of mandatory retirement may spur the widespread use of early retirement offers to older professors. The problem with those offers is that they are most attractive to the best and to the worst workers—to the best because they are most likely to find alternative employment opportunities and to the worst because they recognize that the next step after the offer of early retirement benefits may be involuntary discharge. If, in addition, these elite universities were to abolish tenure, this would give them more flexibility in dealing with the decline in the quality of the professoriat that is likely to follow from the introduction of early-retirement plans.[108]

C. Other Legal Issues of the Elderly

In this section, I shall briefly review some additional legal issues affecting the elderly.

1. TORT LAW

There are two matters worthy of note at the intersection of tort law and the economics of the elderly: (1) the question of special liability standards for the aged as tortfeasors, and (2) the determination of damages for the elderly as the victims of torts.

a. The Elderly as Tortfeasors The economic goal of the tort liability system is to minimize the social costs of accidents,[109] where the social costs of accidents include the precautionary or safety costs incurred by potential victims and injurers, the accident losses (in the event that

106. *See* NATIONAL RESEARCH COUNCIL, ENDING MANDATORY RETIREMENT FOR TENURED FACULTY: THE CONSEQUENCES FOR HIGHER EDUCATION (1991); *see also* ALBERT REES & SHARON P. SMITH, FACULTY RETIREMENT IN THE ARTS AND SCIENCES (1991). "A multivariate study of the age at which academics retire found that tenured faculty members in the arts and sciences retire later when their jobs consist in large part of research, when their teaching loads are lighter, and when they teach good students." REES & SMITH, *supra*, at 23.

107. POSNER, *supra* note 4, at 357.

108. For a fuller discussion, see MATTHEW W. FINKIN, THE CASE FOR TENURE (1996).

109. GUIDO CALABRESI, THE COSTS OF ACCIDENTS (1970) (articulating this economic goal). A modern treatment of tort liability from an economic standpoint may be found in COOTER & ULEN, *supra* note 37.

there is an accident), and the administrative costs of determining which party will bear liability for the accident losses. Setting administrative costs to one side, the economic analysis seeks to show how legal rules for determining liability can induce potential victims and injurers to take the social-cost-minimizing level of care. Clearly, in the case of torts between strangers, the law must accomplish this end in the absence of contractual agreement. That means that it must establish rules that are known or knowable so that people will conform their behavior to those rules.

The novelties that this approach can introduce in the study of tort liability are many, but one that is relevant to Judge Posner's concerns with old age has to do with the distinction that ought to be made between negligence and strict liability. The economic theory holds that negligence should be preferred in circumstances in which there is something that both the potential injurer and the potential victim can do to reduce the probability or severity of an accident. The fact that, under negligence, the potential tortfeasor may be exonerated if he or she takes enough care to discharge his or her duty to the victim raises the possibility that the potential victim will have to bear the entirety of the accident costs. This "residual liability" that may be visited on the potential victim should induce him or her to take care to minimize those accident costs. It makes economic sense to preserve both parties' incentive to take care only where it is possible for each of them to do something to reduce the probability or severity of an accident. By contrast, strict liability is efficient when only the potential tortfeasor may take action to reduce the probability or severity of an accident.

Tort law allows only a few restricted classes of defendants—the blind and minor children, for example—to discharge their legal duty of due care at lower levels of precaution than those that apply to other defendants.[110] Should the law also hold elderly people, as defendants in tort actions, to a lower duty of care than if, all other things equal, they were younger? Heretofore, the law has not. Judge Posner argues that economics could be useful in this inquiry because it helps to illuminate the reasons for a lower duty of care for the blind and for children and thus allows us to see whether or not those same reasons apply to the elderly. He concludes that there ought *not* be a lower

110. W. PAGE KEETON ET AL., PROSSER AND KEETON ON THE LAW OF TORTS 175-82 (5th ed. 1984).

duty for the elderly. I concur with this conclusion but for slightly different reasons. Let me sketch the argument that I think Judge Posner might have made.[111]

First, let us see what economic considerations might justify a lower duty of care for the blind and minor children. Judge Posner asserts that the costs to the blind and to children of taking adequate care are extremely high—so high that, whatever the costs of accident avoidance to the victim, they must be less than the costs to the blind or minor tortfeasor. This is, I think, only part of the economic rationale for a lower duty of care. Another important economic element is the ability of potential victims and injurers to identify their relative accident-avoidance capabilities. Although victims and injurers are not often in a position to make comparisons of their relative costs of accident avoidance before an accident occurs, sometimes they are. Where this identification allows the prospective victim to see that he or she may be injured by a blind person or a child, he or she alone, from that point on, is likely to be able to take precautionary behavior.[112] The argument is that if the victim could identify the potential wrongdoer as blind or a child, and could have taken precaution from that point on but did not, then his or her recovery ought to be reduced or eliminated. A crucial aspect of the argument is the ability of the victim to recognize the special status of the potential tortfeasor and to take accident-avoidance action after that recognition.

I am not persuaded that these factors apply to the elderly as tortfeasors so as to make out a case for lighter duty of care. First, as we have already seen, it is not at all clear that, their physical limitations notwithstanding, the elderly are specially disadvantaged to the same degree as are the blind or children. As Judge Posner puts it, "the cost to the old of avoiding inflicting accidental injuries is lower than that of the child or the blind person."[113] Second (a point not mentioned by Judge Posner), not all elderly people are incapable of taking normal care, as are nearly all blind people and children.

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111. *Id.* at 175-82, 1071-72. I have, unsuccessfully, looked through WILLIAM LANDES & RICHARD A. POSNER, THE ECONOMIC STRUCTURE OF TORT LAW (1987) to see if there is a more satisfying treatment there of the matter of special duties in tort law.

112. The analysis is very much like that of the "last clear chance" defense. For an economic analysis of this issue, *see* Steven Sharell, *Torts in Which Victim and Injurer Act Sequentially*, 26 J.L. & ECON. 509 (1983).

113. POSNER, *supra* note 4, at 306.

If the law were to craft a lower duty of care for the elderly, two problems, at least, would arise. First, what conditions of senescence or age would qualify a person for the special lower duty of care? Would chronological age alone earn the special qualification, allowing, say, a fifty-year-old to have the same exemption as an eighty-five-year-old? Second, even assuming that we could answer that question, we must further recognize that most prospective victims are probably not adept at recognizing an elderly tortfeasor as a member of the class with the special exemption. For instance, most young people think of anyone over forty as ancient; they probably do not draw a distinction between fifty and seventy, even if the law would. This means that one of two inefficient outcomes might result. The nonelderly would inefficiently either assume that everyone who appeared to be elderly might be a member of the protected class and take too much precaution or give up trying to make a distinction and take no extra precaution.

The conclusion that Judge Posner draws—one with which I have no quarrel—is that the law ought not to recognize any special, lower duty of care for the elderly.

b. The Calculation of Damages for Elderly Victims Traditional legal measures of loss allow a victim to recover medical expenses attributable to the wrong done to him or her, the cost of replacing or repairing property, and lost income.[114] When the elderly are victims of wrongdoing, these traditional elements of recovery may present special issues. For example, in a nonfatal accident the medical expenditures for the elderly victim may be extraordinarily high because of the victim's general frailty. And if there are recuperative expenditures, they may be higher than they would be if the victim were younger. However, with respect to lost income (whether the accident involves a fatality or not), the elderly victim may have relatively modest losses. Many of the elderly are retired and living on fixed retirement incomes. Because they may not realistically expect many more years of life, the discounting to present value of this lost pension income may amount to a modest sum.[115]

114. See RESTATEMENT (SECOND) OF TORTS § 924 (1995).

115. The discount rate may well be different for the elderly. In an earlier chapter Judge Posner reported that the subjective discount rate for older persons is likely to be higher than for young persons. *See* POSNER, *supra* note 4, at 70-72.

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None of this may be particularly troubling to one who subscribes to the traditional legal measures of loss. But to one who has absorbed the lessons of Judge Posner's earlier chapters and to one who is familiar with the literature on hedonic damages, there ought to be a recognition that the application of the traditional-loss measures to elderly victims of torts may do those victims an injustice. To see why, we must take a short detour into the literature on the value of life and "hedonic damages."

The law must deal with the issue of the value of a life that has been or will be lost—e.g., in wrongful death actions and in establishing the appropriate level of precaution in administrative agency regulations.[116] Economists are uneasy with equating a life's value with the present discounted sum of the income that the decedent would have earned. Few of us are ever called upon to put a value on our lives, and when we are, few are comfortable putting a dollar amount on the value of being alive. Nonetheless, in our legal system it will not do to say that life is "without value" or "beyond value." The law simply must come up with some method of valuing a life.

One of the alternative methods of valuing life that economists have explored is that of using market purchases to derive an implicit value of being alive. Suppose that a consumer is willing to pay $500 for an optional safety device for his or her automobile that he or she knows will reduce the likelihood of death by 0.0001. Suppose that the value, V, that this consumer places on his or her life is unknown. Given his or her market behavior, it must be the case that

$$0.0001V \geq \$500.$$

Otherwise, he or she would not be willing to spend $500 to purchase the safety option. Solving the inequality gives

$$V \geq \$500/0.0001 = \$5{,}000{,}000.$$

That is, the implicit value of this consumer's life is $5 million.

How would this alternative method of computing the value of life impinge on the elderly as victims?[117] The clear result would be an

116. The literature is very ably summarized in STEPHEN BREYER, BREAKING THE VICIOUS CIRCLE 15-16 (1992) and W. Kip Viscusi, *The Value of Risks to Life and Health*, 31 J. ECON. LIT. 1912 (1993).

117. Judge Posner reports that in 1990, more than 26,000 people 65 years old or older died accidentally. Automobile accidents accounted for almost 30% of those deaths. *See* POSNER, *supra* note 4, at 306 (citing U.S. BUREAU OF THE CENSUS, STATISTICAL ABSTRACT OF THE UNITED STATES 1993 (113th ed.) (Series 128); NATIONAL SAFETY COUNCIL, ACCIDENT FACTS 12 (1993 ed.)).

increase in the amount that elderly victims or their estates would receive. This is because the hedonic value of being alive (the "value of being alive to enjoy life's pleasures" is the usual formula) for the elderly—even though their years are short and their health in decline—may be very high, as indicated by Judge Posner's earlier discussion of the psychology of the old.[118]

2. SOCIAL SECURITY AND HEALTH EXPENDITURES

Two recurring public policy problems that involve conflict between old and young persons are the funding of the Social Security system and of health care for the elderly. One of the principal themes of the popular literature on these matters is that the younger generation is being asked to shoulder an ever-larger portion of the Social Security and health care expenditures of the older generation. This view is such a staple of public discourse that I think it fair to say that almost everyone who ponders public policy accepts it without question. But Judge Posner does question it, and he provides fresh insights on the issues it raises.

Consider Medicare first. Those persons in the United States aged sixty-five and older, while accounting for about thirteen percent of the population, account for slightly more than thirty-three percent of all our medical expenditures.[119] In that much of these expenditures are made by Medicare, the perception is that the public is picking up much of the bill for the health care of the elderly. (Recall that annual Medicare expenditures amount to $106.8 billion, which is approximately nineteen percent of the total amount spent from all sources on benefits to the elderly population.) The elderly are an increasing fraction of the population, life expectancy is increasing, and medical care for the elderly is likely to become even more expensive—all these facts indicate that the fraction of total health care expenditures that may go to the elderly is likely to rise, and perhaps rise significantly, in the future. And the principal burden of this increase will likely fall on either the elderly, the working young, or both. In the short run, the burden will fall most significantly on the working young.[120]

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118. POSNER, *supra* note 4, at 70-72.

119. *Id.* at 36.

120. The burden need not materialize in the form of higher taxes. It could come in the indirect form of the government's reduced spending on non-Medicare programs.

For Judge Posner, one of the most troubling aspects of this development is that it creates potentially rending political tensions in a democracy. The elderly, as the recipients of government largesse, are pitted against the young, as the principal payers for that largesse. Because older people tend to vote in greater proportion than do other demographic groups, there is a danger that they might use their political power to transfer more resources to themselves from the productive younger portion of the population.[121]

A measure of this demographic tension is the "dependency ratio"—the ratio of the population aged sixty-five or older to those aged twenty to sixty-four. This ratio is increasing, from .173 in 1960 to .209 in 1990. This figure and its increase factor prominently in the public debate on health care expenditures for the elderly (and, as we shall see, for Social Security). But Judge Posner doubts that the ratio is a helpful indicator of demographic tensions. It ignores minor children and nonworking adults, both of whom are also "dependent" on the working population. If we redefine the dependency ratio as that of nonworking to working persons, the ratio has fallen steeply since the mid-1960s, principally because of the increased labor force participation of women.[122]

There is another point that is worth making about health-care expenditures for the elderly. Judge Posner has already noted that there is a positive correlation between income and health and that the income of the elderly has grown more rapidly over the last two decades than has the income of other groups. One might conclude that, as the income of the elderly increased, their health should have improved so that their demand for health-care services should have declined.[123] However, nothing in the health-care area is ever quite so simple. There is also a correlation between income and longevity, so that the increasing incomes of the elderly could lead to less health care per year but to more years of life, with the inevitable deterioration in health simply postponed. Whether those developments (greater income leading to better health now and less health care but longer life

121. *Id.*

122. *Id.* at 40.

123. One ought not to use these thoughts to conclude that subsidizing the income of the elderly will cause a reduction in the health-care expenditures of that group.

and more health care later) work out to be an unchanged, net increase, or net decrease in health expenditures for the elderly is not clear.[124]

Precisely the same sorts of concerns about intergenerational tensions may be raised about the Social Security system. But Judge Posner's position on that issue is surprising. He does not make the standard criticism that points out that Social Security is not a true pension system but is, rather, a transfer system and that this method of guaranteeing retirement income is fraught with inefficiencies. Instead, Judge Posner follows Professor Gary Becker in characterizing Social Security as a fair contract between young and old:

> Adults of working age pay taxes to support the public school system, in effect lending the young money with which to purchase human capital. The young repay the loan when they become adults of working age and the generation that paid for their public school education reaches retirement age, by defraying, through social security taxes, some of the living expenses and medical expenses of that generation.[125]

Further, Judge Posner notes that Social Security also reduces the caretaking burden on the younger generation. Adding all this together, he concludes that the net intergenerational transfers from the young to the old are modest:

> Although the picture is decidedly a complex one, full of uncertainty, my research has persuaded me that both the net fiscal and the net full costs, both current and future, of the aging of the American population have been exaggerated. If true, this is very important, because efforts to solve the "problem" of the shifting

124. POSNER, *supra* note 4, at 47. Judge Posner also invokes the multiple-selves problem as relevant to both Social Security and health care issues. For example, the younger person's slighting of his future self is a possible justification for Social Security, but only in the broadest sense. *Id.* at 263-64. As to health care for the elderly, the same problem may exist: the younger self may set aside insufficient funds for the older self (or may behave in a fashion—such as eating too much fatty food—that is detrimental to the older self). Refreshingly, Judge Posner disagrees with those scholars, such as DAN W. BROCK, LIFE AND DEATH: PHILOSOPHICAL ESSAYS IN BIOMEDICAL ETHICS (1990) and RONALD DWORKIN, LIFE'S DOMINION: AN ARGUMENT ABOUT ABORTION, EUTHANASIA, AND INDIVIDUAL FREEDOM 257 (1993), who would "limit the amount of medical care available to the elderly to what the young self would, under conditions of complete information and a just distribution of wealth, be willing to pay for." POSNER, *supra* note 4, at 267. Judge Posner doubts that this is a workable formulation and, in any case, finds it morally unacceptable. In his chapter on euthanasia and geronticide, Judge Posner cites Brock's views "that infanticide need not wrong a newborn infant and that infants lack any serious moral right not to be killed." BROCK, *supra*, at 385 n.14. Judge Posner wryly comments, "Brock's speculations have carried him beyond the gravitational field of American morality." POSNER, *supra* note 4, at 257.

125. POSNER, *supra* note 4, at 284 (citing GARY S. BECKER, A TREATISE ON THE FAMILY 369-74 (1991)); *see also* Richard Kaplan, *Top Ten Myths of Social Security*, 3 ELDER L.J. 191 (1996).

age distribution of the population are bound to deflect resources from what may be more serious social problems.[126]

3. CRIMINAL SENTENCING AND THE ELDERLY

How should the criminal law deal with the elderly as criminals and as prisoners? I begin by noting that this is not yet (and may never be) a pressing social problem. First, the vast majority of crimes are committed by young males, not by older males or females. Second, and as a result of the first point, there are not very many elderly prisoners. Judge Posner cites these statistics on inmates in the federal prisons:[127]

aged 51-55	5%
aged 56-60	3%
aged 61-65	2%
aged over 65	1%

Nonetheless, geriatric prisoners may become a problem in the future. The prison population in the United States has tripled in the last fifteen years, and that fact, combined with such innovations as "three strikes and you're out," which requires mandatory life imprisonment upon the third felony conviction, raise the possibility that the average age of prisoners will increase in the future.[128]

The economic theory of crime and punishment can help to throw light on the issue of the elderly criminal.[129] That theory holds that criminals are rationally self-interested in the sense that they compare the expected benefit of crime (the monetary gain of the crime times the probability of succeeding) with its expected cost (the value of criminal sanctions that will be imposed in the event of conviction times the probability of the crimes being detected and the criminals being arrested and convicted) and commit the crime if the expected benefit exceeds the expected cost. Criminal justice system policies affect the

126. POSNER, *supra* note 4, at 50.

127. *Id.* at 312 (citing communication with the U.S. Bureau of Prisons). Judge Posner notes, importantly, that these percentages are essentially unchanged from the figures for elderly prisons in the federal prisons five years earlier.

128. Let me sound a cautionary note concerning that possibility. First, if the harsher criminal penalties have their desired effect, then there will be relatively fewer prisoners in the future. Second, there is a large cohort of young males who are going to mature into their most crime-prone years within the next five years, which is likely, all other things equal, to cause an increase in crime rates and to fill the prisons of the next decade. Either or both of these developments could cause the average age of prisoners to remain constant or even to fall.

129. *See* Gary Becker, *Crime and Punishment: An Economic Analysis*, 76 J. POL. ECON. 169 (1968) and COOTER & ULEN, *supra* note 37, at 128.

expected cost and, in theory, can achieve any given level of deterrence by setting the expected cost of crime high enough.

The two elements of expected cost dictate two very different deterrence policies. The first calls for an increase in the deterrence effect by purchasing criminal-justice system resources so as to increase the probability of detection, arrest, and conviction. The second contemplates an increase in the deterrence effect through simply raising the level of the criminal sanction. That effect can be achieved by making incarceration longer or more likely or by using higher monetary sanctions (fines). The economic theory favors deterring crime by raising the level of sanctions and by using fines in place of incarceration wherever possible, up to the point at which the criminal is insolvent.

In keeping with this theory, Judge Posner draws attention to the fact that the elderly might perceive the expected cost of crime to be low: they may die soon, so that, whether the sanction is in the form of imprisonment or a fine, the likelihood of the full sanctions being imposed is reduced. As a result, and all other things held equal, we might expect older people to be tempted to commit many crimes and more serious crimes. But they are not. Part of the explanation for that also comes, I believe, from the economic theory.

An increasingly weighty element of the expected cost of crime for the elderly is likely to be their regard for their reputations and the sheer unpleasantness of spending their declining years in a prison, rather than in familiar surroundings (for which, as Judge Posner has explained, the elderly have a heightened taste). Moreover, the elderly, with the benefit of a wide variety of experiences, are less likely to make an error that, according to some recent literature, leads to crime—namely, the systematic exaggeration of the expected benefits of crime and undervaluation of the expected costs.[130]

There are some further points to be made about elderly criminals. They are extremely expensive to incarcerate[131] and unlikely to commit any more crime, which supports releasing elderly criminals

130. James Q. Wilson & Alan Abrahamse, *supra* note 46. The criminals whom Wilson and Abrahamse studied suffer from temporal inconsistency of the same sort that Judge Posner identifies in the multiple-selves problem. With respect to criminal behavior, the problem is that the criminal acts today in ways that are contrary to his true long-term interests, much as does someone who values the immediate pleasure of a cigarette and ignores the adverse long-term consequences.

131. I include the expensiveness of incarceration because the point is such a staple of public discourse on the imprisonment of the elderly. However, Judge Posner has persuaded me that this fact should not figure in the determination of what to do with elderly inmates. He notes that most inmates, if released, would be

from prisons, even if they have not completed their sentences.[132] Two arguments reinforce this humane policy. First, terminating an extremely long criminal sentence for the elderly is not likely to have an adverse deterrent effect on younger criminals. This is because the possibility of extremely long criminal sentences probably has very little effect on young criminals anyway, both because the present value of a further year spent in prison many years in the future is almost zero and because young criminals make systematic errors in these computations. Indeed, Judge Posner suggests capping all prison sentences at forty or fifty years, or, at a minimum, holding out the possibility of parole for elderly prisoners.[133] Second, as noted above, criminal law ought to rely on monetary sanctions far more than it currently does; the argument in favor of fines as a deterrent to crime is even stronger for the elderly.

V. Conclusion

It will come as no surprise to those who have followed Judge Posner's writing to learn that *Aging and Old Age* is a marvelous work. As in much of his past work, which must count as among the most important legal scholarship of our time, he has taken a familiar topic and shown it to us anew. Judge Posner is justly famous for his ability to bring law and economics together, and he has certainly done that in this book. His basic claim, recall, is that economics is better suited to explaining the attitudes and behavior of the aging and the policy issues of old age than any other organized discipline. Even those who might be put off by this assertion will find that the book goes beyond "mere" economics. The breadth of Judge Posner's knowledge is won-

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dependent on public aid and that their medical expenses would be publicly funded whether they were in prison or free.

132. U.S. SENTENCING COMM., GUIDELINES MANUAL § 5H1.1 (1994) allows for reductions in the individual criminal sentences if the prisoner is "elderly and infirm and where a form of punishment such as home confinement might be equally efficient as and less costly than incarceration." Judge Posner, in addition to citing the Sentencing Commission policy with favor, also approves of the policy in the Violent Crime Control and Law Enforcement Act of 1994, § 70002, 18 U.S.C. § 3582(c)(1)(A) (1995), which

> allows for the release at age 70 of a prisoner who has served at least 30 years in prison pursuant to a federal sentence of mandatory life imprisonment for having committed three or more violent felonies, provided the defendant is not a present danger to the safety of any other person or the community.

POSNER, *supra* note 4, at 311 n.23.

133. POSNER, *supra* note 4, at 314.

drous: in *Aging and Old Age* the reader must move from equations and graphs describing regularities in the behavior of older people to apt quotations from William Blake to discussions of original statistical investigations of the productivity of older judges and of employment-discrimination cases to discussions of the insights of Aristotle on the differences between fluid and crystallized intelligence. This is a remarkable intellectual range. But I do not mean to suggest that it is merely the breadth of the range that is notable. Much more shines through this performance: the content is original; the writing style is felicitous; the care with which the sources have been consulted is exemplary; and the humanity that the author brings to the subject is moving.