Behavioral Economics: Lessons from Retirement Research for Health Care and Beyond

A Presentation by CBO Director Peter Orszag to the Retirement Research Consortium

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It’s a great pleasure for me to be with you at the Retirement Research Conference. In my remarks today, I’d like to build on some of the terrific work by researchers in the area of savings and retirement (a good part of which was done by the people in this room), drawing on insights from behavioral economics. I’ll describe some of the lessons that come from that work and then aim to convince you that much more work awaits in the critical arena of health economics.

Decisions About Saving and Behavioral Economics

With the help of research in behavioral economics, we have, in recent years, made major strides in understanding how people make decisions about saving and retirement. Research now demonstrates what many people who aren't economists always knew: that when it comes to complex choices such as whether to save and when to retire, people's decisions are often influenced by social norms and the presentation of their options—in addition to the “substance” of the options themselves. Behavioral economics has suggested ways to change how such choices are presented in order to help improve decisionmaking without necessarily constraining choice. Those suggestions—particularly regarding the automatic enrollment of workers in employer-provided savings plans—are beginning to see widespread adoption. This trend represents a tangible example of how economic research can be rapidly translated into concrete policy changes that should improve people’s lives.

The Utility of Defaults

Let me start by describing a few key insights from behavioral economics on defaults and their implications for policy on saving and retirement. Inertia, it turns out, is a powerful force in decisionmaking, so people tend to stick with a default, even when they can, at very low cost, pick another option.

A number of studies have compared participation rates in employer-sponsored retirement plans when enrollment is automatic and when employees must act to become
The studies find that automatic enrollment dramatically increases participation rates, especially for subgroups, such as those with low income, for which participation is otherwise very low. The differences exist despite the fact that workers can easily opt out of the default arrangement.

In one recent study, 45 percent of newly hired workers participated in a 401(k) plan when doing so required opting in, but 86 percent did so when enrollment was automatic (see Figure 1). For workers making less than $30,000, the difference in participation rates was even larger: 25 percent when workers had to opt in and more than triple that, 77 percent, when they were automatically enrolled.1


Results such as those have prompted rapid adoption of automatic enrollment in 401(k) plans. In 2003, only about 8 percent of 401(k) plans featured automatic enrollment, but by 2007, the number had risen to about 36 percent (see Figure 2). For large retirement plans, the share is even higher. As of 2007, 51 percent of 401(k) plans with 5,000 or more eligible employees offered automatic enrollment.3

Defaults could be used to not only encourage participation in savings plans but also increase the rate at which participants save, which may have particular application for automatic-enrollment plans. Such plans tend to feature relatively low default contribution rates, averaging about 3 percent of pay.4 Those defaults, it has been shown, tend to anchor people at an inadequate savings rate, including people who, in the absence of a default, would have saved more.5 But plans could automatically increase the savings rate over time, requiring people to opt out if they wished to avoid the increases. For example, Richard Thaler and Shlomo Benartzi have proposed a plan

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called “Save More Tomorrow,” which automatically increases savings rates whenever employees receive a raise. Such an approach harnesses the power of inertia. It also ensures that the automatic increases never result in reduced disposable income, thus recognizing the strong aversion most people feel toward anything they can characterize as “a loss.” This mechanism has been shown to substantially increase savings rates among participants. As of 2007, about 33 percent of the 401(k) plans that offered automatic enrollment also offered some form of automatic escalation in savings rates, up from about 9 percent only three years before.

Use of automatic enrollment and automatic escalation of savings rates should increase further in the wake of the Pension Protection Act of 2006, which provides liability protection and additional incentives to encourage adoption of these defaults.

Changes in other defaults could also improve outcomes for a number of other decisions related to saving and retirement. For example:

- **Automatic Individual Retirement Accounts.** About half of U.S. workers do not have access to an employer-sponsored retirement plan. To aid them, some researchers have suggested automatic IRAs (individual retirement accounts), whereby companies that do not have an employer-sponsored retirement plan can, unless workers opt out, directly deposit some share of employees’ salaries.

- **Automatic Investment Portfolios.** Extensive research in behavioral economics has found that people often act irrationally in picking their investment portfolio. One way to overcome such failures in decisionmaking is for companies to set default investment portfolios that are rationally diversified, unless workers choose to select their own investments. The Pension Protection Act has taken a step in that direction, by establishing incentives for employers to use what are termed “qualified default investment alternatives” for employees automatically enrolled in defined-contribution plans.

- **Automatic Annuitization.** In order to prevent retirees from running out of assets late in life, one proposal would automatically annuitize a substantial portion of an employee’s 401(k). It would allow employees to opt out of the arrangement and receive a lump-sum payment within the first two years of receiving income from the annuity.

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7. Profit Sharing/401k Council of America, Annual Survey.


Social Security and the Decision to Retire

Before leaving the topic of retirement, I want to briefly discuss the anchoring effect that the age set for receiving full Social Security benefits can have on the time at which people first claim retirement benefits.\textsuperscript{11}

Although a large share of Social Security recipients choose to begin getting retirement benefits at the first opportunity, age 62, a substantial number wait to receive benefits until they reach the age at which they qualify for full benefits, even as that age has been increased in recent years because of the 1983 reform of the Social Security system. (That age was 65, is currently 66 for people eligible for retirement today, and is headed to 67.) As the age for receiving full benefits has risen, so has the age at which people claim benefits. For example, for those born in 1937—the last cohort to qualify for full benefits at age 65—18 percent of the men and 12 percent of women who were primary beneficiaries first claimed Social Security retirement benefits at that age. For those born in 1941, who could first receive full benefits at the age of 65 years and 8 months, the numbers are quite similar—with 16 percent of the men and 11 percent of the women claiming benefits at the new, higher age (see Figure 3).

Apparently, people are responding not only to financial incentives but also to how the decision is framed. If someone claims the early benefits at age 62, Social Security payments are decreased relative to what they would have been if the person had waited, but the adjustment is actuarially “fair”; so, on average, the typical retiree will receive roughly the same amount of benefits, in net-present-value terms, regardless of when benefits are first claimed. In the other direction, if someone postpones claiming benefits, the payments are increased the longer the person waits, up to age 70. Thus, there is nothing “special” about the full-benefit age that should cause a disproportionate number of people to first claim benefits at that age rather than at, say, 63 or 68. Instead, the full-benefit age seems to act as a signal that leads a substantial number of people to target that age.

Some observers have opined that eligibility for Medicare, which occurs at age 65 for people who are not disabled, has affected the age at which people claim Social Security benefits. Indeed, some people without access to health insurance in retirement may continue working at a job that has employer-provided health insurance and then claim Social Security benefits once they are eligible for Medicare; other people without access to such insurance may continue working to have sufficient income to pay for medical costs out of pocket until they become eligible for Medicare. But by that

Figure 3.
Distribution of the Age at Which Primary Beneficiaries Claim Social Security Benefits by Birth Year

(Percent)


a. "Entitlement age" is the age at which people claim Social Security benefits. It is measured in two-month increments; the notation "62.5" = 62 years and 6 months.

explanation, one would not expect the age at which people claim Social Security benefits to have shifted as it has.12

The signaling effect of the full-benefit age might be used as a policy tool. Compare, for instance, increasing the full-benefit age with adjusting the benefit formula while keeping that age the same. Even though both methods could be designed to produce a similar overall reduction in Social Security benefits, the two policies might very well affect decisions about claiming benefits (and therefore presumably retirement) differ-

12. A small blip in the age at which people claim Social Security benefits continues to occur three months prior to age 65. At that age, people visit Social Security field offices to fill out the eligibility forms for Medicare, and they may find it convenient to sign up for Social Security benefits at the same time.
ently. The evidence from the 1983 reforms suggests that an increase in the full-benefit age would cause a substantial proportion of people who once would have claimed benefits at age 65 to delay when they do so and, presumably, when they retire; but an adjustment to the benefit formula would probably have a smaller such effect.

Health Care and Behavioral Economics

It is impressive to look back at the changes in pensions and retirement savings over the past decade and see how research findings from behavioral economics have been put into practice. But when we shift our attention to what is perhaps an even more urgent public policy issue—health care costs and the large portion of those resources that do not result in improved health—progress has been disappointing. Despite the central importance of health care, relatively little research in behavioral economics has been conducted in the area, and, of course, even fewer results have been implemented in policy.

To reduce the amount of money spent on ineffective health care, we must first determine which procedures and treatments are effective. What might be less obvious to the casual observer—but apparent to the many people in this room who have worked on the optimal structure of retirement and savings systems—is that information is necessary but not sufficient. Incentives must be properly structured and made evident. Defaults must reflect expert knowledge and judgment about what choices will optimize the welfare of the typical individual but still allow individual choice. And the environment for decisionmaking must account for and counteract biases that tend to lead people astray.

Health Care Costs’ Lack of Salience

One factor helping to perpetuate inefficiencies in health care is a lack of clarity regarding the cost and incidence of health insurance, especially employment-based health insurance. Employers’ payments for such insurance and nearly all payments by employees for that insurance are excluded from individual income and payroll taxes. Although both theory and evidence suggest that workers ultimately finance their employment-based insurance through lower take-home pay, the cost is neither salient nor clear to many workers.

We know from other settings that salience, and not just underlying financial incentives, matters. When consumers go into a store, for example, they see pretax prices on the items. One might assume—or at least the Econ 101 rational optimizing model would assume—that consumers are generally aware of which items are taxable and what the tax rate is. Yet when researchers went into a grocery store and posted after-tax prices on some items, sales of those goods fell by about 8 percent.13 They found similar effects when examining the effects of sales taxes and excise taxes (which are included in posted prices) on alcohol sales.

I suspect, on the basis of similar logic, that workers demand less efficiency from the health system than they would if they knew the full cost that they pay for coverage via forgone wages or if they knew the actual cost of the services being provided. I also suspect that making the underlying costs associated with employment-based insurance more transparent could prove to be quite important in containing health care costs. That could be done by taking such a simple step as showing on workers’ pay stubs the employer’s share of premiums.

**Behavioral Pathways to Improving Efficiency**

What can be done to improve the efficiency with which health care is delivered—and specifically to reduce the delivery of services with little or no value? In health care, the vast majority of decisions are heavily influenced by doctors and other medical professionals. Restraining cost growth will therefore primarily require changing the choices they make. Cost constraints could be implemented by refusing to pay for certain services. But subtler actions will probably be more sustainable from a political economy perspective.

A particularly important aspect of behavioral economics is the role of social norms. Like other people, doctors tend to follow professional norms of behavior. There are a number of reasons for this, among them that following professional norms is simple and may help defend against charges of malpractice. That said, research suggests that norms in the medical community do not always follow evidence-based standards of best practice.

Per capita health care spending varies widely across the United States, and yet the very substantial geographic variation in cost per beneficiary is not correlated with health outcomes. That regionally divergent pattern of health care delivery probably reflects, at least in part, differences in norms of practice among doctors. Professional norms may differ in various places because local colleagues may have a disproportionate influence and because a tendency to favor the status quo may make norms slow to change in the face of new evidence.

How can norms be shifted? One mechanism involves greater use of evidence-based medicine, as exemplified by a change in practice in intensive care units (ICUs) in Michigan. One of the mainstays of such units is the central venous catheter, which delivers medicines and nutrients directly into the bloodstream of a patient. Each year in the United States, an estimated 80,000 patients in ICUs experience infections related to such catheters, at an average treatment cost of $45,000 per infection. Up to 28,000 of these patients die. Yet a team of physicians managed to cut the rate of these infections in many Michigan ICUs by two-thirds, saving more than 1,500 lives and $75 million over 18 months, by instituting a five-step checklist to help doctors keep catheters sterile and empowering nurses to intervene if they saw steps being skipped.14

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That experience offers a case study showing that aggressively promulgated standards can alter a long-standing and suboptimal status quo.

As I mentioned, however, research suggests that the “mere provision of information” to physicians and hospitals often results in “exceedingly modest behavioral response.”\textsuperscript{15} Indeed, efforts to publicize the insights of the Michigan ICU program nationwide have met with only mixed success in increasing the use of the checklist.\textsuperscript{16} To alter providers’ behavior, it is probably necessary to combine research on the comparative effectiveness of treatments with aggressive promulgation of standards and changes in financial and other incentives.\textsuperscript{17}

Returning to the issue of defaults, Jeffrey Liebman and Richard Zeckhauser note that a key benefit of the employment-based insurance system is that employers effectively provide defaults for most workers, including the insurance itself.\textsuperscript{18} Some recent proposals, such as the Wyden-Bennett bill, would retain some “facilitation” role for employers, even while shifting the insurance system away from an employment-based one. In addition, the proposal would enroll those who did not actively choose a health plan in the lowest-cost plan available to them.

Furthermore, a default for less expensive generic drugs (as opposed to brand-name drugs) can influence how people fill prescriptions, and the default choice for drug plans themselves can influence which plan people wind up in. For example, the Medicare drug program has enrolled individuals eligible for its low-income subsidies in one of the lower-cost drug plans that charge them no premiums; although they have the option of switching to another plan, many of those enrollees have not done so.

**Behavioral Economics and Healthy Living**

Finally, the ultimate objective of any health care system is to promote health, whether by treating diseases that arise or by preventing them from occurring in the first place. And perhaps an even more important determinant of health than the health care system is an individual’s behavior. I will therefore finish up by talking a bit about things that may help us live healthier lives—which is socially desirable even if it does not reduce health care costs (and, indeed, many steps to improve health outcomes may not reduce costs). In particular, I’d like to talk about healthy living in the context of a disturbing trend—the increasing gap in life expectancy between high and low socioeconomic groups, due at least in part to less healthy behaviors among the poorer and less well educated.


\textsuperscript{17} See Congressional Budget Office, *Research on the Comparative Effectiveness of Medical Treatments* (December 2007).

The Increasing Life Expectancy Gap by Socioeconomic Group. Life expectancy in the United States has been steadily increasing for the past several decades, and the gaps between women and men and between whites and African-Americans have narrowed somewhat. But recent gains in life expectancy have not been shared equally across socioeconomic groups, and differences by educational attainment and income have been growing. In other words, socioeconomic status has become an increasingly important determinant of life expectancy, whether measured at birth or at age 65 (see Figure 4).

19. See Congressional Budget Office, Growing Disparities in Life Expectancy (April 17, 2008). Life expectancy is the number of additional years an individual is expected to live at a given age. Life expectancy here refers to period life expectancy, which is calculated using current death rates. Period life expectancies are generally lower than cohort life expectancies (which are calculated using projected death rates for a given cohort) because death rates generally fall over time.
In 1980, life expectancy at birth was 2.8 years more for the highest socioeconomic group than for the lowest. By 2000, that gap had risen to 4.5 years. The 1.7-year increase in the gap amounts to more than half of the increase in overall average life expectancy at birth between 1980 and 2000.

In 1980, the difference in life expectancy at age 65 between the highest and lowest socioeconomic groups was 0.3 years. By 2000, the difference had grown to 1.6 years. That increase in the gap equals more than 80 percent of the increase in overall average life expectancy at age 65 over that period.

Changes in life expectancy between 1990 and 2000 show a similar pattern among people with different levels of educational attainment. The gap in life expectancy at age 25 between individuals with a high school education or less and individuals with any college education increased by about 30 percent over that period. The gap widened because of increases in life expectancy for the better educated group; life expectancy for those with less education did not increase. That growing differential by level of educational attainment has occurred for both men and women and for both blacks and whites.

Differing rates of mortality from heart disease and cancers (excluding lung cancer) have been the largest contributor to the growing disparities in life expectancy by educational attainment. Two other diseases related to smoking—lung cancer and chronic obstructive pulmonary disease—have added to that differential. At least half of the increase in the gap in life expectancy is attributable to people age 65 or older. Why so much of the difference appears at older ages is not entirely clear, but differences in lifelong health habits might play an important role. Behaviors possibly contributing to the increase include:

- **Smoking.** One study estimates that differential trends in smoking-related diseases explain at least 20 percent of the increasing gap in life expectancy between groups with different levels of education.

- **Obesity.** The nationwide increase in obesity began among the less educated and could now explain part of the widening socioeconomic gap in mortality rates.


22. Ibid.

■ **Self-Management of Disease.** Adherence to medical treatments and therapies is greater among people who are more educated. The role of self-management, particularly in the case of chronic diseases, may have increased over time.24

■ **Unhealthy Lifestyles and Obstacles to Health Care.** A balanced diet, exercise, and other healthy behaviors may be less prevalent among groups with low income and less education, and some measures suggest that the disparity is increasing over time. In addition, since the mid-1990s, the gap in health insurance coverage between low- and high-wage workers has been growing and has been accompanied by a widening gap in access to health care services as well.25

Increases in average life expectancy have clear implications for the future cost of both Medicare and Social Security: As beneficiaries live longer, they will receive benefits for a longer period, thereby increasing the programs’ costs.26 Although projections of Medicare and Social Security have long taken into account the existence of a gap in life expectancy among socioeconomic groups, the continued widening of the gap must be considered afresh. The implications of the trend are clear for Social Security but less so for Medicare.

■ For Social Security, a continued widening of the gap would reduce progressivity—that is, the redistribution of resources from high- to low-income beneficiaries on a lifetime basis when both taxes and benefits are taken into account—and worsen the long-term shortfall in financing.

■ For Medicare, it is not clear whether a widening gap would exacerbate the cost increases that will result from increasing longevity. How the share of Medicare spending on low-income individuals would change depends on relative proportional changes in life expectancy. Further work is needed to clarify this important issue.

**Reform to Promote Healthy Lifestyles.** As we know, at companies that offer 401(k) plans, defaults in retirement saving reduce the gap between the participation rates of less educated and lower-income workers and those with more education and income. In health care as in savings, well-designed defaults could perhaps also narrow the differences in health behaviors. If so, defaults may also help to reduce the growing gap in life expectancy by education and income.


26. There may be effects on other government programs as well, such as Medicaid or veterans’ programs.
What sorts of defaults may matter? About 20 percent of Americans participate in federal nutrition programs, so restructuring those programs could have a considerable effect.27 The school lunch program, in which governments can determine the food served to children, may be most amenable to presentational changes. Research has shown, for example, that individuals may alter what they eat because of the distraction of conversation and increase their consumption as the size of a gathering increases. Consequently, simply decreasing the number of students seated at each table may affect the amount of food consumed at school meals.28 Options for other federal nutrition programs, such as the Women, Infants, and Children program and the Supplemental Nutrition Assistance Program (formerly called the Food Stamp program), are also worth exploring.

People naturally exercise more when their environments are conducive to doing so.29 For example, one small study of older women found that those who lived within walking distance of a store walked 36 percent more than those who did not.30 People are probably particularly sensitive to small impediments to exercising. For example, someone with a gym down the hallway and therefore quite easily accessible may be much more likely to exercise than someone with a gym even just a few blocks away. Efforts to increase the ease with which people can walk, bike, and engage in recreational activities in cities, especially in low-income neighborhoods, may pay real dividends in terms of health quality.

**Conclusion**

Research has increasingly shown that decisions are not made in a vacuum. Defaults matter. Perceptions of social norms matter. And policy designs need to account for those factors that, until recently, received little consideration in economic and policy analysis. Current pension policies are at the forefront of efforts to incorporate the lessons of behavioral economics. I hope that the same energy and care can be applied to research and policy development in the health care arena. The endeavor has the potential to yield great insight into how to better contain costs and improve people’s health—perhaps especially the health of those on the lower rungs of the socioeconomic ladder.


28. Ibid.

