Thank you so much for inviting me to your beautiful city. It is wonderful to be here. I wish I were here for longer, but even for a few hours it is such a treat and an honor to visit Florence and its European University Institute (EUI).

As you know, my title today is “Governing America: The Emergence of Behavioral Law and Economics.” With the election of United States President Barack Obama, the field of behavioral economics has arrived in a significant way on the legal policy stage in America. Multiple media outlets have championed Obama as the behavioral economics President. Many have heralded the arrival of behavioral economics at the center of legal policy making in particular. Perhaps the clearest indication of the influence of behavioral law and economics is the appointment of Professor Cass Sunstein, a central figure in the field, to the post of “regulatory czar” (in the form of head of the Office of Information and Regulatory Affairs) in the Obama administration. My lecture today will trace the evolution of behavioral law and economics to the point of being poised to shape and reshape basic aspects of American law in the coming years.


I. American Ideals and Behavioral Economics

To get started, it is important to give a brief description of “behavioral economics.” Particularly in light of market events in recent years, it has become more and more accepted that the assumption of human rationality that traditional economics made may not always hold true, and in fact may fail spectacularly. People often exhibit “bounded rationality” rather than the hyperrationality traditional economics assumed. To give just one example for now—we’ll be doing many more examples later—traditional economics analysis would assume that if one gave an individual a relevant piece of information—say about the risk of a certain product such as a medication—the individual would apply that information correctly to his or her own decision, would assume that the information applied to him or her, and would determine his or her behavior optimally in response. In fact, empirical evidence suggests multiple breakdowns in this chain. People often say “it can’t happen to me” even when they are well informed about the magnitude of a general risk. Such “bounded rationality” — not “irrationality” but not hyperrationality either— is at the heart of the field of behavioral economics.

Behavioral law and economics is the field of law and economics that applies bounded rationality and other aspects of behavioral economics to questions of legal policy and design. When one analyzes law, figures out how it works and whether it is a good or a bad thing, it is of obvious importance to bring to bear accurate assumptions about human behavior and decision making. Behavioral economics provides such a picture of human behavior.

In governing in today’s world, or at least in today’s America, behavioral law and economics has emerged as a central influence, as I noted above. Professor Sunstein’s appointment in particular makes this a very exciting time for behavioral law and economics in the United States.
Key to the emergence of behavioral law and economics on the American policy scene has been a set of developments in the field in the last five or so years. Before the last few years, most work in behavioral law and economics tended to be what is pejoratively termed “paternalistic”. Jeffrey Rachlinski, an American scholar in behavioral law and economics, said, I think with slight exaggeration but without being entirely off the mark, that behavioral law and economics at that point had been “used to support the restriction of individual choice, almost without exception.”\(^3\) To go back to the example I mentioned earlier about giving someone information about a product, such as a medication, and the risks of the product, the first generation behavioral law and economics response to errors in people’s processing of such information – the “it won’t happen to me” phenomenon – was generally a recommendation to ban or tightly regulate the consumption of certain risky products.

The central idea of today’s behavioral law and economics, by contrast, is to develop and analyze legal strategies that take people’s bounded rationality into account but respond to such bounded rationality without imposing strict limits on people’s choices. These approaches represent a middle ground between ignoring bounded rationality, on the one hand, and imposing the sorts of “paternalistic” policies referenced by Rachlinski, on the other.

Three publications have been most often cited as exemplifying the new orientation of behavioral law and economics. Most recently, Richard Thaler, a behavioral economist at University of Chicago, and Professor Sunstein published a 2008 book, *Nudge*, that offers a number of concrete strategies in the spirit of the new behavioral law and economics. In 2006, Sunstein and I published an article, “Debiasing Through Law,” that also develops and elaborates,

in a more general way, the new orientation within behavioral law and economics. Finally, in
2003, Colin Camerer, another behavioral economist, and coauthors offered an approach that they
called “asymmetrical paternalism.” What unites all three of these approaches within behavioral
law and economics is the attempt to structure law to respond to bounded rationality without tight
restrictions on people’s choices.

The remainder of my lecture will offer a fuller account of the new behavioral law and
economics. First I will describe in more detail what bounded rationality is and offer some
guiding examples. Second, I will work with two particular examples of current behavioral law
and economics in some depth in the hope of illuminating central features of the behavioral law
and economics paradigm and its promise for governing in America and, perhaps, beyond.

II. Two Categories of Bounded Rationality

In speaking of bounded rationality, behavioral economics has emphasized two primary
categories of behavior. The first is the idea – and the empirical regularity – that what people
choose is very sensitive to the starting point they occupy. An area in which this phenomenon has
been studied extensively is with respect to saving for retirement. There is now an overwhelming
body of evidence from the United States – where private saving rather than government support
is the centerpiece of retirement security – that when individuals make their decisions about how
much of their current earnings to put aside for retirement, they are heavily influenced by the
default option chosen by their employer. Roughly speaking, any reasonable savings rate that the
employer picks as the default, the starting position, is the rate to which almost everybody will

5 Colin Camerer, Samuel Issacharoff, George Loewenstein, Ted O’Donoghue, and Matthew
Rabin (2003), Regulation for Conservatives: Behavioral Economics and the Case for
“Asymmetric Paternalism,” University of Pennsylvania Law Review.
stick. Note that this is an extremely important economic decision for almost every American. Yet if the default is 1% of pay, almost everybody is likely to save 1% of pay; if the default is 4% of pay, almost everybody is likely to stick with 4% of pay; if the default is 7%, people are likely to stick with that. So even in a context in which it is not particularly costly to change the default position – employees fill out various forms at the workplace; they do not have to make a special trip to a different location; etc. – people nonetheless will often just stick with what the starting position is. This “status quo bias” is the central form of bounded rationality emphasized in Nudge, the 2008 book by Thaler and Sunstein.

A second type of bounded rationality is misestimation. This is quite different from the first case in the sense that it is a factual mistake. Recall the example I mentioned of someone buying a product that may cause harm. Misestimation refers to the fact that many people tend to think that their personal probability of (say) cutting off a finger from a snowblower (or suffering an adverse effect from a medication) is one in a million when actually the risk is (say) one in fifty thousand. So it’s a factual error, a misestimation of a relevant probability. This is the form of bounded rationality emphasized in Sunstein’s and my 2006 “Debiasing through Law” article. Because I am very committed to the debiasing through law approach, I will first discuss bounded rationality in the form of misestimation and then turn to bounded rationality in the form of the status quo bias or starting point effects emphasized in Nudge.

A. Misestimation

Misestimation of the probability of something happening can arise in a number of ways. Sacrificing breadth for depth, I will focus here on just one, “optimism bias.” Optimism bias is
the tendency of most of us to think that things will turn out better for *us* than for the average person. Thaler and Sunstein have a typically wonderful discussion:

> Before the start of Thaler’s class in Managerial Decision Making, students fill out an anonymous survey on the course Web site. One of the questions is “In which decile do you expect to fall in the distribution of grades in this class?” Students can check the top 10 percent, the second 10 percent, and so forth. Since these are MBA students, they are presumably well aware that in any distribution, half the population will be in the top 50 percent and half in the bottom. And only 10 percent of the class can, in fact, end up in the top decile.

> Nevertheless, the results of this survey reveal a high degree of unrealistic optimism about performance in the class. Typically less than 5 percent of the class expects their performance to be below the median (the 50th percentile) and more than half the class expects to perform in one of the top two deciles.

> MBA students are not the only ones overconfident about their abilities. The ‘above average’ effect is pervasive. Ninety percent of all drivers think they are above average behind the wheel. This applies to professors, too. About 94 percent of professors at a large university were found to believe that they are better than the average professor.

> Unrealistic optimism can explain a lot of individual risk taking. Asked to envision their futures, students typically say that they are far less likely than their classmates to be fired from a job, to have a heart attack or get cancer, to be divorced after a few years of marriage, or to have a drinking problem. Smokers are aware of the statistical risks, and often even exaggerate them, but most believe that they are less likely to be diagnosed with lung cancer and heart disease than most non-smokers.

> Unrealistic optimism is a pervasive feature of human life; it characterizes most people in most social categories. When they overestimate their personal immunity from harm, people may fail to take sensible preventive steps.

Optimism bias can be illustrated using the retirement saving context that has been so heavily emphasized in discussions of the effect of starting points. (The broader point I will be suggesting is that many examples that are often analyzed through starting point effects may also be analyzed in terms of misestimation.) If we think about optimistically biased employees who are trying to decide how much to save for retirement, the employees are likely to underestimate

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the probability that their standard of living will fall in retirement given their current rate of saving. Suppose that the true risk of their standard of living falling significantly in retirement is $X$, given their current level of saving, but they think it’s only $0.3X$ because they are optimistically biased. The crucial feature of the misestimation error here is that it is a factual mistake – people think what is best estimated as $X$ is actually $0.3X$. And obviously at least in some cases the factual mistake will lead to a different rate of saving – *relative to individuals’ own underlying preferences about present consumption versus saving for later* – than the rate they would choose if they correctly estimated $X$. In this case, they are mistaken about a matter of fact, and as a result they make a judgment that fails to maximize their own personal values, whatever those may be.

Of course, we may have a person who cares very little about retirement, so that even if the person’s risk estimate was corrected to $X$, the person still wouldn’t save very much. That’s just fine. Indeed, it is the central virtue of behavioral law and economics based on misestimation of probability; we do not need to try to determine what people “most want,” and we are content when they set their $X$ right as a factual matter. Whatever personal values about mostly saving or mostly enjoying today and not saving for the future people may hold, we are respecting their preferences.

It follows directly from what I have said thus far that a normative defense of a policy response to this form of bounded rationality – where someone misestimates $X$ as $0.3X$ – can be made without taking a position on underlying preferences about present consumption versus saving for later. Correcting or at least reducing misestimation has the potential to make individuals better off according to whatever their own conception of wellbeing is. Moreover, in contrast to earlier, “paternalistic” applications of behavioral law and economics, people’s
freedom to choose the outcomes they desire is not curtailed when one seeks merely to correct an optimistically biased estimate of the probability of a future event.

B. Starting Point Effects

The form of bounded rationality heavily emphasized in *Nudge* is the sensitivity of choices to starting point and status quo effects. As we discussed earlier, whatever the percentage that an American employer sets up as the default savings rate, most people have a strong tendency to follow. So if the default is not to save, most employees won’t save. If the default is to save 5% or maybe even 10%, that’s what most people will do.

The implication of such starting point effects is that people’s choices about consumption versus retirement saving suggest an ambiguity in their underlying preferences (or at least in what aspect of their preferences is activated) regarding present consumption versus saving for later. (Recall that transaction costs are minimal in this setting.) Whatever savings rate we set as the default, that’s the rate toward which people tend to lean.

As Thaler and Sunstein emphasize, however, it remains the case with default rules that no option is entirely banned or put off limits. In the retirement saving context, individuals remain legally free to set whatever savings level they want even with a default of (say) 5% in place. A policy that mandated a particular rate of saving with no opportunity to opt out would not leave individuals as much freedom.

To be sure, as a practical matter few employees opt out of the particular savings rates that have been studied. But it is still easy to see the importance of the opt-out opportunity in the case of a specified savings rate of, say, 50% – a rate at which one expects many Americans would certainly not stick with the default rate. In the new behavioral law and economics, legal freedom
of choice is preserved in response to starting point effects, just as that freedom is preserved in response to misestimation.

III. Behavioral Law and Economics Applications

We can build on our discussion of bounded rationality by considering two applications of current behavioral law and economics analysis. Both applications will involve using law to correct people’s misestimation – what Sunstein and I term “debiasing through law.”

A. Debiasing Through Law: Bodily Risks

The first behavioral law and economics application I shall discuss emphasizes how debiasing through law can be used in response to underestimation of risks of bodily harm. As a setting for our discussion, consider a classic study from the 1960s of perceptions of tetanus risks among Yale University seniors. The seniors participating in the study were instructed that tetanus is a disease that may cause serious harm to individuals not properly vaccinated against it via a tetanus shot. After the presentation, many of the Yale seniors expressed an intention to get vaccinated in the coming weeks. But when the researchers followed up and looked at whether the seniors actually did get a tetanus shot during this period, relatively few students had done so.

Now, not getting the tetanus shot may well have maximized the satisfaction of the preferences of most of these students. Economists have for long emphasized the difference between what people claim they intend to do (here, get a tetanus shot) and what they actually choose to do. (I will suggest shortly that the debiasing through law version of focusing on what people actually choose to do is preferable to the traditional account – but the shared premise of

both of these arguments is that “actions speak louder than words.” The fact that students say they intend to get the shot in the coming months does not necessarily imply that getting the shot would maximize their well-being as they define it.)

Why might refraining from getting the shot during one’s senior year at Yale maximize the students’ overall well-being? First of all, under at least the current version of the American immunization scheme, most college students are not actually due for a tetanus shot at the end of their time in college. They typically need one in the year or two after college, but they don’t need one yet during college if they are on the standard immunization schedule. Moreover, the senior year at a college such as Yale is exceptionally busy for many students, who are likely to be engaged in such pursuits as applying to competitive graduate programs, selecting post-college employment, and researching senior honors theses. Finally, tetanus shots, unlike some other immunizations, are often unusually painful and unpleasant. As one recipient reported on the Internet, “I got a tetanus shot 22 days ago. The muscle in my arm where the shot was given is still so sore the arm is useless. I’ve used it despite the pain in an effort to strengthen the muscle, but it causes the pain to become severe.”8 If that experience is extreme, “[t]he truth is that the tetanus vaccine is … a particularly painful shot to receive and the residual pain can last for days or even weeks. Some people report feelings of numbness … radiating pain throughout their arms, neck, and back, … general fatigue and muscle weakness.”9 The bottom line is that it is far from obvious that the overwhelming majority of Yale seniors in the study who did not get vaccinated during their remaining time in college were making a poor decision for themselves; particularly if they did get vaccinated following graduation, not getting the shot during their final semester may well have maximized their preference satisfaction.

9 Id.
While it is thus important not to rush to the conclusion that the seniors were mistaken in not getting tetanus shots before graduating, it is also important not to rush too quickly to the opposite conclusion. Optimism bias may well have led many of the seniors in the study to underestimate the risk of tetanus harms if they failed to remain immunized. Just like Thaler’s students all think they will be in the top 20 percent of his class and only 5 percent of them think they will be in the bottom 50 percent, the Yale seniors may tend to think that tetanus harms “won’t happen to them.”

How might the law respond? It could seek to ensure that the seniors’ estimates of their risk of tetanus harms in the absence of immunization are as close to accurate as possible. Before discussing how specifically the law might do this, note the crucial point that such a “debiasing though law” response does not in any way rely on knowing whether the seniors should in fact choose to be immunized while still in college. This is important because I believe the policy maker often doesn’t really know what is best for people in light of their underlying preferences. I don’t know whether these Yale seniors should be getting a tetanus shot during their final semester at Yale or not, and what I’d like to see is a policy that doesn’t involve the policy maker in trying to make ambiguous value judgments such as this. Maybe the low take-up observed in the study is actually optimal and will continue to be observed even in a context in which seniors accurately estimate their personal risk of tetanus harms. At least on a first pass, the focus of the law should be on ensuring the accuracy of the factual estimates relevant to people’s decisions, not on channeling them toward a particular decision such as getting a tetanus shot during the senior year of college.

How might a policy help to improve the likelihood that college seniors accurately perceive the risks of tetanus harms? Giving them general statistical information about the
average risks of such harms is unlikely to be enough; they may assume “it won’t happen to me.”

If one tells someone that there’s a 1 in X chance that he or she will get this disease if he or she doesn’t keep up to date on vaccinations, the listener may tune that out, and, if asked, opine that his or her own risk is (say) .3X. However, Sunstein and I describe a potentially promising method, using the tools of behavioral economics, to reduce underestimation of risk:

[O]ne response to the risk that optimistically biased individuals believe ‘it won’t happen to them’ is the availability heuristic . . . . [As an illustration of this heuristic,] individuals who are asked how many words in a 2,000-word section of a novel end in “ing” give much larger estimates than individuals who are asked how many words have “n” as the second-to-last letter. [B]ecause making an occurrence available [i.e., readily accessible] to individuals will increase their estimates of the likelihood of the occurrence, availability is a promising strategy for debiasing those who suffer from excessive optimism. One prominent method for making an occurrence available to individuals is exposing them to a concrete instance of the occurrence.10

Relevant evidence on this sort of strategy can be drawn from the smoking context. Empirical evidence suggests that many smokers have an accurate impression of the general risks of smoking (or even overestimate them), yet they believe their own personal risks are much lower. However, Frank Sloan, Kerry Smith, and Donald Taylor, in a 2003 book published by Harvard University Press, present evidence that if people are aware of a concrete narrative of someone like them who smoked and got lung cancer, that has a much bigger effect on their estimate of their own risk from smoking.11 So general statistical information tends to be downplayed – a predictable corollary of optimism bias – but a more available, concrete account of harm tends to increase people’s personal risk estimates.

A real world example from the smoking context comes from the “parting letters” campaign of the American Legacy Foundation, an organization that was started with the

10 Jolls and Sunstein, op. cit. (quote at pp. 209-10).
11 For further discussion, see Jolls and Sunstein, op. cit., p. 210.
proceeds from the tobacco litigation in the United States. People who are dying from smoking-related lung cancer write letters to their children or other family members – letters that in a striking way bring home the tragedy of what’s happened. One such letter reads, “Dearest John, I am so sorry my smoking will cheat us out of 20 or 30 more years together. Remember the fun we had every year at the lake. I will ALWAYS love and treasure you. Linda.”\textsuperscript{12} The suggestion is that this kind of concrete account will help people to personalize the risks of smoking in a way that general information often doesn’t.

Returning to tetanus and Google, here is a concrete account of an occurrence of the disease of tetanus, as returned by the search engine:

Eduardo rubbed his jaw and tried to open his mouth, wondering about the tight muscles in his face and neck that had plagued him all day. . . . [Others] noticed that he [was] stiff, grinned oddly, and ignored his food. [They] saw him violently jerk his neck and torso . . . . Eduardo’s spasms persisted, and . . . [i]nvisible pulleys had stretched his mouth into a tight smirk. But his eyes were wide open, alert, and terrified . . . . His head jerked back, his shoulders and trunk arched up, and he gasped in pain. But he remained conscious throughout the 15-second attack . . . . This was no ordinary seizure . . . . [F]ew physical displays are as dramatic as the spasms provoked by tetanus. Its cause is a protein toxin so potent that many victims require months to recover from its effects, if they survive at all.\textsuperscript{13}

Presenting the Yale seniors with not only the general statistical risk of tetanus harms but a concrete and truthful account of those harms, such as Eduardo’s experience, would be likely to increase their risk estimates over the underestimated magnitude predicted by optimism bias.\textsuperscript{14}

Assuming the estimates did not increase to a level significantly above the correct level X – an important assumption – seniors would be more likely to reach decisions about immunization that maximized the satisfaction of their own preferences. The crucial point here is that we can

\textsuperscript{12} Jolls and Sunstein, op. cit. (quote at p. 215).
\textsuperscript{13} http://www.immunize.org/reports/report059.asp.
\textsuperscript{14} For discussion of a related but distinct approach in the original Yale study, see Christine Jolls, \textit{The New Behavioral Law and Economics} (manuscript).
believe a policy that moves the students’ risk estimates closer to X has a good chance of increasing their personal well-being without having any opinion on what choice about vaccination they should ultimately make.

Of course, as already suggested, a student who was at .3X before reading about Eduardo may be at 2X – or 10X – after learning of his experience. As Sunstein and I emphasized, calibration of policy responses is needed to avoid overshooting. Empirical evidence obviously has a strong role to play here. But the key point is one of principle: in moving factual beliefs as close to the true average as possible, we are not forcing – or even channeling people towards – some values over others. Rather, armed with more accurate perceptions, the Yale seniors may choose to get vaccinated or not based on what choice would satisfy their own underlying preferences.


As a second example of current behavioral law and economics based on misestimation, return now to the retirement saving problem discussed earlier. Recall that optimistically biased individuals may underestimate the probability that their standard of living will fall significantly in retirement given their current savings rate. A debiasing through law response to such underestimation would seek to reduce the gap between people’s probability estimate of their standard of living falling in retirement given their current savings rate and the actual probability of that happening. We can use the same type of approach as above, and, in fact, a close analogue may be found in a well-known 1973 book by Ralph Nader, the American consumer activist and 2000 Presidential candidate, and Kate Blackwell, entitled *You and Your Pension*. 
In the 1960s and early 1970s, the central problem with retirement saving in the United States was that employer-provided pensions were often wrapped in so many exemptions and exceptions that employees could easily end up with no right to any pension after decades of service. (American law has since effectively eliminated most such behavior.) Nader and Blackwell did not choose to emphasize general statistics about the risk of not receiving a pension, however; instead they explicitly sought to combat people’s likely optimism bias using specific, concrete accounts:

Charlie Reed thought he was going to get a pension. He went to work when he was twenty-one as a coal miner for Jones & Laughlin Steel Corporation, and after twenty-three years in the mines, he was laid off. . . . Thirteen years later, Reed applied for the pension he thought he had been earning during his twenty-three years in the mines. He found there wasn’t one; instead, there was a rule Reed didn’t know about; he had to have twenty years of service within the thirty years preceding his application for benefits. The rules made no exception for miners who had been laid off. . . .

If you are inclined to say, ‘It can’t happen to me,’ meet some of the people who found out it could. . . .

Joseph Mintz, fifty-six, of Buena Park, California, has been in aerospace work for over thirty years and has no pension coming to him. For twenty-seven years he worked for three different companies. At each job, he was laid off before he had the ten-year minimum service requirement for a pension. One company laid him off after nine years and ten months. . . .

He didn’t know that you may not get a pension if you are laid off or change jobs.15

Similar accounts of people today who experienced a significant decline in their standard of living at retirement, and the ways in which that affected their lives, could help to counteract the optimism bias some people may exhibit today in determining their savings rate now that most employees no longer receive traditional defined-benefit employer pension plans and, thus, must make choices about retirement saving. As with the tetanus example, the debiasing through law approach can increase people’s ability to make decisions that maximize the satisfaction of their

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15 Ralph Nader and Kate Blackwell (1973), You and Your Pension (quote at pp. 4, 6-7; first and third emphases in original; second emphasis added).
preferences without channeling them toward a particular lawmaker-ordained outcome, such as a specified savings rate. Instead of setting or enabling a default savings rate, law might profitably require the provision of several truthful accounts of former employees’ retirement experiences in connection with current employees’ decisions on how much to save.

IV. The New Behavioral Law and Economics: A “Third Way”

Both of the behavioral law and economics applications I have discussed illustrate, in general terms, a basic theme of President Obama’s campaign for the Presidency. The basic theme is the allure, in many domains, of “a third way” – a new path that takes what is good and leaves what is bad from our familiar ways of doing things. The behavioral law and economics of today, I suggest, fits this mold precisely. What is good in the first generation of behavioral law and economics is its recognition of, and response to, the fact that people exhibit bounded rationality. What is good in traditional law and economics, by contrast, is its emphasis on leaving individuals the freedom to choose to live in ways that maximize the satisfaction of their own preferences, regardless of whether those preferences are shared or endorsed by lawmakers. Behavioral law and economics today seeks to recognize and take account of bounded rationality while at the same time preserving the freedom to choose differently from what lawmakers might choose if the choice were left up to them. Thus, the Obama administration’s embrace of behavioral law and economics is congruent with the general notion of a “third way” between familiar poles or positions.

We stand at an important moment for behavioral law and economics. Financial and other regulation in the United States is being radically revamped, with significant attention to the sorts of modern behavioral law and economics ideas I have described in this lecture. It is my hope,
and my belief, that behavioral law and economics will play an instrumental role in helping America emerge from the current crises a stronger, freer, and more humane nation.

Thank you so much for your attentiveness, and I look forward very much to your questions and comments during the discussion.