

## Beyond Rationality?

Rationality is the central assumption of economics, which makes work that challenges the assumption interesting to economists for at least two reasons. One is that we might be wrong; rationality might not be the best way of predicting and explaining human behavior. The other is that such work might expand our understanding of how it is rational to behave. My favorite example of both is *Thinking, Fast and Slow* by Daniel Kahneman, a psychologist who won, and probably deserved, a Nobel prize in economics. Its subject is how the human mind works, why we make the particular mistakes that we make. It thus presents a challenge to my old argument in favor of the rationality assumption:

...the tendency to be rational is the consistent, and hence predictable, element in human behavior. The only alternative to assuming rationality, other than giving up and concluding that human behavior cannot be understood and predicted, would be a theory of irrational behavior, one that told us not only that someone would not always do the rational thing but also which particular irrational thing he would do. So far as I know, no satisfactory theory of that sort exists. (*Price Theory*, [Chapter 1](#))

Arguably it now does.

Kahneman's central insight is that we act as if we had two different mechanisms for making sense of the world around us and deciding what to do. System 1 works automatically and very quickly to recognize a voice over the phone, tell whether a stranger's face is expressing anger, generate conclusions on a wide range of subjects. System 2, conscious thought, takes the conclusions generated by System 1 and either accepts or rejects them in favor of its own conclusions, generated much more slowly and with greater effort. Attention is a limited resource, so using System 2 to do all the work is not an option.

System 1 achieves its speed by applying decision rules, some of which can be deduced from the errors it makes. It classifies gambles into three categories: impossible, possible, or certain. An increase in probability within the middle category, say from 50% to 60%, appears much less significant than an increase of the same size from 0% to 10% or from 90% to 100%.<sup>1</sup> That offers a possible solution to an old problem in economics, the lottery-insurance puzzle. If someone is risk averse he buys insurance, reducing, at some cost, the uncertainty of his future. If someone is risk preferring, he buys lottery tickets, increasing, at some cost, the uncertainty of his future. Why do some people do both?

Kahneman's answer is that insuring against your house burning down converts a very unattractive outcome (your house burns down and you are much worse off as a result) from probability 1% to probability 0%, a small gain in probability but a large gain in category (from possible to impossible). Buying a lottery ticket converts a very attractive outcome (you get a million dollars) from probability 0% to probability .00007%, a small gain in probability but a large gain in category (from impossible to possible). Both changes are more attractive to System 1 than they would be to a rational gambler so both may seem, to the same person, worth doing.

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<sup>1</sup> Kahneman's much more detailed account of the fast mind's view of decision under uncertainty is in Chapter 29 of *Thinking, Fast and Slow*.

One of the attractions of Kahneman's book is that, although some of his evidence consists of descriptions of the results of experiments, quite a lot consists of converting the reader into an experimental subject, putting a question to him and then pointing out that the answer the reader probably offered, the one most people offer, is provably, indeed obviously, wrong.

Consider the following example:

Linda is thirty-one years old, single, outspoken, and very bright. She majored in philosophy. As a student, she was deeply concerned with issues of discrimination and social justice, and also participated in anti-nuclear demonstrations.

Which is she more likely to be:

A bank teller

A bank teller and active in the feminist movement

Most of the people to whom the question was put judged the second alternative as more likely than the first, despite that being logically impossible. System 1, having a weak grasp of probability, substitutes for the question it cannot answer an easier question it can: "Which sounds more like a description of Linda?"

One interpretation of Kahneman's work is that we now have a theory of irrationality. By studying the rules of thumb that the fast mind uses we can predict not merely that people will not always make the rational choice, which we already knew, but, sometimes, what irrational choice they will make.

Another interpretation is that Kahneman has expanded by a little our understanding of rationality. We already knew that its simplest version — people always choose the right action — had to be qualified to allow for information costs. Spending a hundred dollars acquiring the information needed to discover which of two brands of car to buy is irrational if the difference between the two is less than two hundred dollars, since a random choice would get the right answer half the time. What Kahneman demonstrates is that we need to take account not only of the cost of getting information but the cost of processing it. The rational choice is to use the low-cost mechanism, the fast mind, for most decisions, the high cost, available in more limited quantity, for the most important ones.

A third interpretation of some of it, in particular the discussion of choice under uncertainty, is that we have expanded our understanding of rationality by including the emotions associated with outcomes as well as the outcomes themselves. When you buy a lottery ticket you not only get a very small chance of winning a lot of money, you also get a certainty of being able to daydream about what your life would be like if you won, daydreams that are more vivid and pleasurable if they have some chance, however small, of happening. When you have a 95% chance of losing a law suit for \$10,000 and turn down an opportunity to settle for \$9000 you are missing an opportunity to reduce your expected loss but you are also retaining the possibility, even if small, of avoiding the unpleasant emotions associated with losing a gamble. A sufficiently detailed theory of rational choice should include that kind of cost and benefit along with the direct costs and benefits of winning or losing a gamble.

Kahneman makes this point in his discussion, writing, for example:

Of course, what people acquire with a ticket is more than a chance of winning; it is the right to dream pleasantly of winning.

I made the same point more than twenty years before Kahneman's book was published (although perhaps not before he first made it elsewhere<sup>2</sup>), writing in the discussion of the lottery/insurance puzzle:<sup>3</sup>

Consider the lotteries you have yourself been offered — by *Reader's Digest*, Publisher's Clearinghouse, and similar enterprises. The price is the price of a stamp, the payoff — lavishly illustrated with glossy photographs — a (very small) chance of a new Cadillac, a Caribbean vacation, an income of \$20,000 a year for life. My rough calculations — based on a guess of how many people respond to the lottery — suggest that the value of the prize multiplied by the chance of getting it comes to less than the cost of the stamp. The expected return is negative.

Why then do so many people enter? The explanation I find most plausible is that what they are getting for their stamp is not merely one chance in a million of a \$40,000 car. They are also getting a certainty of being able to daydream about getting the car — or the vacation or the income — from the time they send in the envelope until the winners are announced. The daydream is made more satisfying by the knowledge that there is a chance, even if a slim one, that they will actually win the prize. The lottery is not only selling a gamble. It is also selling a dream — and at a very low price.

Yet another explanation of some of what Kahneman describes is that it is the effect of commitment strategies, discussed in Chapter XXX [Making Economics Fun]. Another example Kahneman offers of the failure to follow the rational model is the willingness of a country to keep fighting even after the war is almost certainly lost.<sup>4</sup> An alternative explanation is that, by committing itself to act that way, perhaps by promoting the belief in its population that surrender is more shameful than defeat, the country makes conquering it more expensive hence less likely to be attempted. *Ex post* the action is irrational — like a doomsday machine going off, retaliation against a nuclear attack, or the barroom brawl discussed in the earlier chapter — but *ex ante* committing to it may be rational. A similar explanation might apply to the individual who rejects a \$9000 settlement offer. He would be better off settling, but the knowledge that he is the sort of person who settles instead of litigating makes suing him more attractive, since it lowers the legal cost of suing him. The behavior may be irrational but the commitment strategy that produces it need not be.

Economists have always known that their models are a simplified picture of choice in the real world, since even if individuals are perfectly rational the costs and benefits they face are more complicated than the costs and benefits included in our equations. The question is whether factors not included in the models can be added without losing more in additional complication — a sufficiently elaborate model can fit anything and predict nothing — than they gain in greater

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<sup>2</sup> Kahneman and Tversky wrote about the pattern of choice (under uncertainty at least as early as 1979 (“Prospect theory: An analysis of decision under risk”) but a quick look through the article did not find any discussion of the relevance of emotions associated with choices.

<sup>3</sup> *Price Theory: An Intermediate Text*, third edition, Chapter 13, pp. 320-321.

<sup>4</sup> This is a poor example for Kahneman's purposes for another reason: Rationality is an assumption about individuals not groups. Market failure, discussed in Chapter XXX [Teaching Economics], describes situations where individual rationality does not produce group rationality. Irrational behavior by governments is consistent with, indeed arguably predicted by, rational behavior by individuals, a point I discuss in [Chapter 53](#) of *The Machinery of Freedom*.

realism. One test, discussed in Chapter XXX [How to do Economics], is whether the expanded model does a better or worse job of predicting things we do not already know.

Kahneman has provided some intriguing candidates for expanding our models. It is less clear whether he has also provided evidence that our central assumption is false, less clear still that it is not useful.

### **Kahneman and Caloric Leakage**

The malfunctions of the fast mind may help explain why it is so hard to lose weight. Consider caloric leakage, the principle that holds that although a cookie has lots of calories a piece of a broken cookie does not, the calories having leaked out, so you might as well eat it. Or consider my well-established weakness for marginal cost zero food, another serving at an all-you-can-eat buffet.

The explanation for the belief in caloric leakage is the inability of my fast mind to deal with fine distinctions. A piece of a cookie is different from a cookie so my knowledge that it has half the calories of the cookie never gets triggered. The explanation for my weakness to temptation is that, faced with zero marginal cost food, I have no need to pass the decision of whether to eat it to my slow mind in order to decide whether it is worth the cost in money and my fast mind does not worry about the cost in calories.

Also, my fast mind has a high discount rate, is reluctant to give up benefits now for larger benefits in the future. And I like cookies.

When I offered this somewhat tongue in cheek application of Kahneman's ideas on my blog, one commenter replied:

My slow mind has long since stopped letting my fast mind into all-you-can-eat buffets.

### **Are these Facts True: The Replication Crisis**

So far I have taken it for granted that the facts on which Kahneman based his theories were true. Reporting on some of them, he wrote:

When I describe priming studies to audiences, the reaction is often disbelief . . . The idea you should focus on, however, is that disbelief is not an option. The results are not made up, nor are they statistical flukes. You have no choice but to accept that the major conclusions of these studies are true.

We now know that he was wrong. When other researchers attempted to replicate those studies they were for the most part unable to do so. That was part of what came to be known as the replication crisis, largely but not entirely in psychology. Most of the most prominent and striking results in the priming literature turned out to be bogus. There was one notable case of deliberate fraud by a prominent researcher, but it seems clear that most of what happened was honest error. Researchers did not adequately understand how easy it was to get apparent confirmation for a false theory that you wanted to be true.

One way of doing so is illustrated by the Texas sharpshooter story:

A visitor to a Texas town observes a man with a rifle who has been shooting at a barn some distance away. The barn wall is peppered with bullet holes, each in the precise center of a painted circle, clearly an impressive performance. While he watches, the sharpshooter takes another shot, walks up to the barn with a pail of paint and a brush and paints a circle around the bullet hole.

You want to know whether a particular supplement slows aging. You test two hundred people for biological markers of aging, put a hundred on the supplement and a hundred on a placebo for two years, then test them again. The average amount of aging in the two groups is about the same, which is disappointing

But that is only the first step in analyzing the data. Perhaps the supplement works for men but not for women or for women but not for men; you analyze the data separately for each group. Perhaps it slows aging in the elderly but not the young, or the young but not the elderly. Perhaps it works only for elderly women. Perhaps it slows aging for the first year of the experiment but not the second, or the second but not the first. Perhaps ...

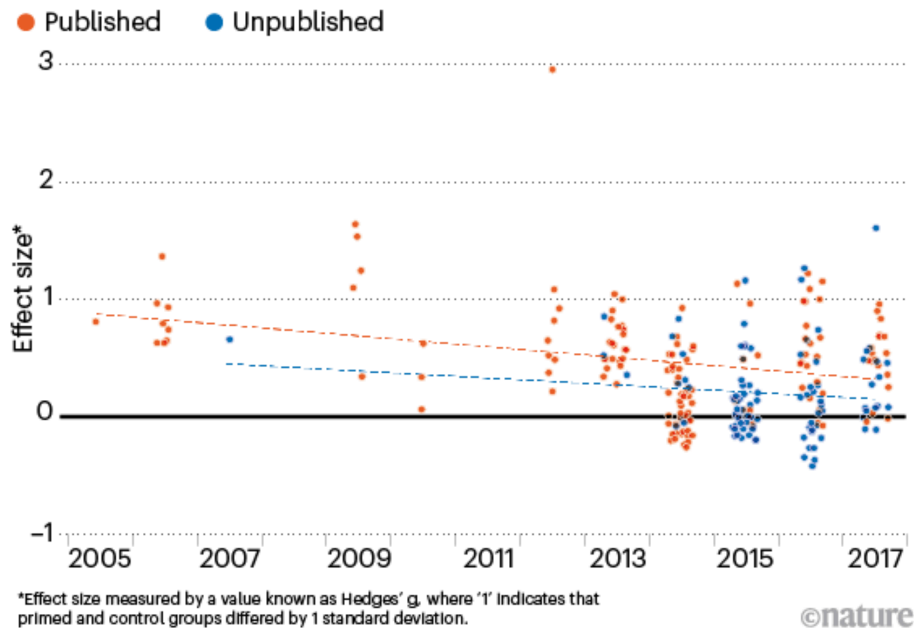
You end up with twenty different versions of “the supplement works,” test them all, and find that one of them gives a statistically significant result. You have now learned something — the supplement slows aging for elderly men, has little effect on other groups.

Statistical significance is a measure of how likely it is to get your result by pure chance. A significance of .05, often used as a cutoff, means that you have about one chance in twenty of getting a result that good by accident. You have done twenty different experiments, so it is not surprising that you got lucky once.

This is the Texas sharpshooter fallacy, choosing the theory you are testing only after looking at the data you are using to test it. One way to avoid it and prove to others that you have done so is to preregister your research project, state what theory you are testing before, not after, you collect and analyze the data. You no longer have the option of selecting whatever theory best fits your data and reporting only on it.

The same problem can occur through a different mechanism: publication bias. Twenty different researchers do similar studies using twenty different supplements, each carefully preregistering. Nineteen of them get no result. Since failing to discover something is not very interesting, none of them publish. One gets lucky. His result, significant at the .05 level, is the only one that the rest of the field see.

One of the studies during the replication crisis looked at experimental results that were not published as well as ones on the same subject that were. The published experiments showed results that fit the theory, the unpublished did not.



Source: P. Lodder, based on data from Lodder, P., Ong, H. H., Grasman, R. P. P. P. & Wicherts, J. M. “[A comprehensive meta-analysis of money priming](#), *J. Exp. Psychol. Gen.* **148**, 688–712 (2019).

Another source of false results is the tendency for people to see what they expect to see; even a small number of errors, all in the same direction, can raise random data to significance. One attempt at multiple replications of a prominent priming result discovered that it only worked if the people observing and recording the results were told what result they were looking for.<sup>5</sup>

The more general problem is the system of incentives. Academics get jobs and promotions by publishing articles, so have a strong incentive to produce publishable results. A true theory is more likely to have already been discovered and published than a false one, making the latter more likely to be novel and, if supported by what appears to be empirical evidence, publishable. Peer review can spot some sorts of errors, but not all; the reviewer has to take the data as he gets it and has no way of knowing if what is being reported is the fifth, or twentieth, version of the experiment.

In the case of priming research, these incentives produced a body of results widely accepted in the field which now appear to be mostly false, results that played a substantial role in Kahneman’s work. As he [wrote](#) in 2017:

Clearly, the experimental evidence for the ideas I presented in that chapter was significantly weaker than I believed when I wrote it. This was simply an error: I knew all I needed to know to moderate my enthusiasm for the surprising and elegant findings that I cited, but I did not think it through. When questions were later raised about the robustness of priming results I hoped that the authors of this research would rally to bolster their case by stronger evidence, but this did not happen.

<sup>5</sup> Doyen, S., Klein, O., Pichon, C-L. & Cleeremans, A., “[Behavioral Priming: It's All in the Mind, but Whose Mind?](#)” *PLoS ONE* 7, e29081 (2012).

I am still find Kahneman's overall argument convincing, but more for the experiments in which I was the subject than those he reported. He is probably correct that the mistakes we make can be to some extent predicted, but some of his conclusions about what the pattern is and why were too confident.

### **The Dangers of Libertarian Paternalism**

In *Nudge*, Cass Sunstein and Richard Thaler offer a proposal based on Kahneman's ideas; they call it "libertarian paternalism." The idea is that choice architects, people setting up alternatives for other people to choose among, can and should take advantage of the predictable errors of the fast mind to nudge the chooser into making the choice the architects think he ought to make, the one they believe he would make if he were fully rational. It is paternalism because it is getting people to act as someone else thinks they ought, libertarian because it leaves the individual free to act in a different way if he wishes to.

As the authors point out, any time you are offering someone else choices, whether "you" are a government agency, an employer or a firm selling something, you are necessarily deciding in what form to make the offer, hence engaging in choice architecture. If you are going to do it, you ought to know what you are doing and do it in a way designed to produce the result you want to produce — in their case, choices that result in the chooser better achieving his own goals.

The libertarian part of the proposal depends on leaving the individual free, at no significant cost, to make the choice you do not want him to make. But if you do not want him to make that choice it will be tempting to make it more and more difficult, to require him to fill out forms, file them in the right place, perhaps even neglect to tell him that forms exist to be filled out, that the alternatives you don't want him to choose are available. There is thus a serious slippery slope problem, making it possible for their arguments to be used as the justification for actions far from libertarian. The point occurred to me when I read the book. It was reinforced by a real-world experience at about the same time.

When our daughter was in her first year at Oberlin the college sent us a bill, a list of charges and a total we were to pay. One of the items in the list, included without explanation, was ten dollars for the "Green Edge Fund." Being curious, I did an online search to find out what it was. It turned out that it was a fund to subsidize environmental projects by students. It had been voted in the previous year as an optional ten dollar per pupil payment.

"Optional" means that you don't have to pay. We sent in our check minus the ten dollars and I sent an email to the president of the College, pointing out that he was billing parents for money they did not owe. I received back an apologetic email from an administrator, explaining that the program was a new one and they had not yet gotten everything set up properly.

A month or so later I received a bill from the College for ten dollars. I wrote back to the office that sent the bill, pointing out that they had billed me, and all other parents, for ten dollars we did not owe, that rather than our owing them money they owed money to all of the parents who had paid the ten dollars. I also sent an email to the administrator. A few weeks later, I received second bill for ten dollars, shortly followed by an email from the administrator telling me that the matter had been taken care of and I could ignore the bill.

When we got our bill for the second semester it included a form for our daughter to sign and hand in during the first two weeks of the semester requesting a waiver of the charge for the Green Edge

fund. The form contained a description of how the money would be used that most at that college would regard as fraudulent advertising if it were the product of, say, the phone company, since it was put as what would happen not what they hoped would happen. The bill did not include any mention of the fact that the college had, in the previous semester, charged parents about thirty thousand dollars that they did not owe, nor any offer of a refund to any parent who wanted it.

My wife went to Oberlin thirty-some years earlier and had had a similar experience. In her day it was a one dollar per student charge to support one of Ralph Nader's PIRGs.<sup>6</sup> A student could get out of it by going to the right office on the right day and telling them he didn't want to pay it. On further enquiry, we discovered that the student "donation" was still there, now increased to eight dollars. There did not seem to be any effort to inform parents or students that they had the option of not paying it, a fact of which most students were unaware.<sup>7</sup>

An optional charge where the default choice is to pay it is the sort of thing Sunstein and Thaler propose, a nudge in the direction of doing what those responsible believe that most of those nudged would want to do if they took the time to think about it. But the people constructing the choice architecture know what result they want to get, they believe they are doing good and so not constrained by what they themselves would consider proper principles of morality and honesty in a commercial context, so it is very easy for them to make the "wrong" choice more and more difficult and obscure until what is optional in theory becomes mandatory in practice.

Oberlin has always been—to quote historian Geoffrey Blodgett '53—a “peculiar mix of scholarly ambition and stubborn moral idealism.” (From an Oberlin [web page](#))

But not enough idealism to motivate the college to apologize to parents for billing them for money they did not owe and offer a refund.

### **Why It Might Not Work**

Consider two firms, otherwise identical, with different default rules. Firm A tells its employees that it normally diverts 10% of their salary to a pension fund but will be happy to pay the money directly to the employee if he prefers. Firm B tells its employees that it normally pays them all of their salary but will be happy to divert 10% of the salary to a pension fund for any employee who prefers that option.

One might expect that in each firm about the same fraction of employees would choose each option, since the amount at stake is large enough to make the extra cost of filling out a request or stopping by the human resources office to reject the default trivial in comparison. According to Thaler and Sunstein, however, such default rules have quite a large effect: Many more employees will go with the pension plan in firm A than in firm B. Their explanation is that this is an example of a pattern of irrational choice, a preference for the status quo, as predicted by Kahneman.

When I discussed this issue with my daughter Rebecca, she offered an explanation that makes the behavior rational. The cost of switching into or out of the pension plan is negligible but the cost of

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<sup>6</sup> [Public Interest Research Group](#).

<sup>7</sup> According to a 2013 [letter](#) in *The Oberlin Review* arguing against reauthorizing the program, “by a margin of 74 percent to 26 percent, students are not aware of this funding structure. Further, only 13 percent of students know that they can receive a reimbursement for the mandatory \$8 donation.” The argument apparently succeeded. As best I can tell from articles in the *Oberlin Review*, the automatic \$8 per student charge was abolished by the student senate in 2013 (*Oberlin Review*, [2013](#)). The Green-edge fund, however, appears to be still functioning.



getting the information needed to decide whether to switch in or out is not. In this case as in many others, one cheap way of getting information is by observing what other people do. If, as seems plausible, the firm will have chosen as the default the option most of its employees prefer, thus saving trouble for all concerned, the default rule is a signal of the choices of other employees, hence cheap evidence of what an employee who doesn't know which option is better should do. The employee rationally goes along with the default option unless he has some good reason to think the alternative is better.

If this analysis is correct, it implies that soft paternalism might not work for very long. Once it becomes clear that default rules are being chosen not by the employer to fit employee preferences but by the government to nudge employees into doing what the government thinks they should do, the argument for going along with the default breaks down.

### **Choosing Choice Architects**

Some of these issues were hashed out some years ago on [Cato Unbound](#) in an exchange involving Thaler, Glen Whitman, a libertarian critic of libertarian paternalism, and other posters. Thaler [protested](#) that what he was in favor of was "one-click" libertarian paternalism, meaning that it should, wherever possible, be costless to choose the disfavored alternative. But he recognized that other people might use the idea in less libertarian fashion. Which got me thinking... .

In other contexts, it is useful to shift the discussion from outcomes to mechanisms. It is straightforward to argue that transport firms ought not to engage in various monopolistic practices. To get from there to transport regulation requires some argument to show that the regulators will reduce such practices rather than increasing them, a hard argument to make given the history of the ICC and CAB. That moves us from the theory of optimal regulation to public choice theory, from what regulators should do to what they will do.

Suppose we apply that approach here. Thaler et. al. argue, convincingly, that one cannot avoid choice architecture, since individuals are making choices and some process is deciding how those choices are presented to them. We can, however, imagine different processes to make that decision, different ways of selecting our choice architects. We could, for example, leave firms free to decide for themselves whether automatic payment of part of an employee's wages into a retirement system is the default or we could have a government agency make the decision for them. In choosing between those alternatives, one obvious question is which will come closer to Thaler's goal of nudging individuals into making the choice that best serves their goals while leaving them free to make other choices at no significant additional cost.

It's tempting, at least for libertarians, to claim that the answer is obvious, that the firm has, for conventional economic reasons, an incentive to tailor what it produces to the desires of its customers and a similar incentive with regard to employees. Hence one might expect the firm to always produce the version of choice architecture, for both groups, that was optimal. But that is to ignore a central element of Thaler and Sunstein's argument, that since individuals are not perfectly rational a choice architect can take advantage of their irrationality to control, at least to some extent, their choices — including choices such as what firm to work for or what product to buy. The obvious tactic for a choice architect, including a private one, is to nudge individuals in the direction not of their interests but of the objectives of the architect.

That brought me to something else I had been thinking about, not libertarian paternalism but the technology of making firms work. There are some I deal with, the lumberyard where I used to get material for carpentry projects was one example, which feel like happy places. Employees are friendly to customers and each other and it feels real. Asked for advice, they give it, even when not in their immediate interest — a camera store which, when I asked them what scanner I should buy to turn slides into digital photos, told me I would be better off sending the slides to a service, not theirs, that would scan them for me.

I have never run a firm and would probably not be good at it, but presumably some people who do run firms know how to do it in a way that results in the people involved acting in a way that takes account of the interests of both customers and fellow employees. And I think that, to a considerable extent, customers and employees can recognize firms that work that way despite the attempts of firms that don't to pretend they do.

I would rather, as customer or employee, have my choices architected by those people than by a government agency.

### **And Again the Replication Crisis**

What do the replication crisis and its lessons suggest about the subject of *Nudge*? One of the most striking results Kahneman had reported, relevant to Sunstein and Thaler's claims of the strength of default rules in contexts such as their pension example, was a framing effect in organ donation:

A directive about organ donation in case of accidental death is noted on an individual's driver license in many countries. The formulation of that directive is another case in which one frame is clearly superior to the other. Few people would argue that the decision of whether or not to donate one's organs is unimportant, but there is strong evidence that most people make their choice thoughtlessly. The evidence comes from a comparison of organ donation rates in European countries, which reveals startling differences between neighboring and culturally similar countries. An article published in 2003 noted that the organ donation rate was close to 100% in Austria but only 12% in Germany, 86% in Sweden but only 4% in Denmark.

These enormous differences are a framing effect, which is caused by the format of the critical question. The high-donation countries have an opt-out form, where individuals who wish not to donate must check an appropriate box. Unless they take this simple action, they are considered willing donors. The low-contribution countries have an opt-in form: you must check a box to become a donor. That is all. The best single predictor of whether or not people will donate their organs is the designation of the default option that will be adopted without having to check a box. ...

It was a striking result, but it turned out that it [wasn't true](#). Individuals in the high donation countries were simply presumed to consent to donation; there was no form they ever saw on which to check a box to opt out. Just as with the Oberlin PIRG, most people did not know that it was possible, with sufficient time and effort, to withdraw consent. The numbers Kahneman reported were not donation rates but rates of presumed consent. Donation in practice was based not on presumed consent but on the consent of the survivors of the deceased. Rates varied among countries, but not with the striking differences Kahneman reported.

What about work since *Nudge* was published? “[A Systematic Scoping Review of the Choice Architecture Movement: Toward Understanding When and Why Nudges Work](#)” is a review of the experimental literature inspired by *Nudge*. It concludes that much of it is of low quality; “not a single study in our sample was mentioned to be preregistered.” So we don’t actually know either how effective choice architecture is in practice or, equally important, whether it has been more nearly Thaler’s “one-click” libertarian paternalism or Oberlin’s funding model for optional donations.

## Am I Irrational?

A human being should be able to change a diaper, plan an invasion, butcher a hog, conn a ship, design a building, write a sonnet, balance accounts, build a wall, set a bone, comfort the dying, take orders, give orders, cooperate, act alone, solve equations, analyze a new problem, pitch manure, program a computer, cook a tasty meal, fight efficiently, die gallantly. Specialization is for insects.

— Robert Heinlein, [Time Enough for Love](#)

In a number of ways my views and acts are difficult to explain as rational. I will list them:

1. As an economist I believe in division of labor and the benefits of specialization, yet I find Heinlein’s ideal, quoted above, persuasive. I would like to be that sort of person. To the extent that I am — I think I can claim at least thirteen items on his list — I am proud of it.
2. I recently attended a social event, a dinner for forty or fifty people in the host’s home, with catered food. That felt wrong to me. When we host such events, as we occasionally do, almost all of the food, aside from any nibbles brought by the guests, is cooked by me and my family.
3. At this point in my life I am comfortably well off, yet I still make an effort to save money in small ways. We buy flour from Costco in 25 pound bags, pay attention to prices in the grocery store. I look at the right side of the menu as well as the left when deciding what to order. If we eat out, it is usually at relatively inexpensive ethnic restaurants. Looking for a new one, we ignore anything whose online description is \$\$\$\$. I could afford to fly business class but never do, save for a few times when someone else was paying for it.
4. We do a lot of things in-house that it would arguably make more sense to do through the market. I build our bookcases in my basement workshop. If a button comes off a shirt or a pants seam comes out or the knee of my jeans wears through, my wife fixes it. At any reasonable per hour value for her time, it would usually be cheaper to hire the work out, perhaps to replace the jeans — I get mine from [Haband](#), not [L L Bean](#). But we don’t.

Arguably this is all irrational behavior, perhaps behavior that made sense at an earlier and poorer stage of life, retained through habit.

But perhaps not.

I am comfortably well off at present, but my income reaches me through an elaborate set of social, legal, and political mechanisms and the world is an uncertain place. Quite a lot of Americans who were comfortably well off in 1928 were no longer so in 1930. The same was true *a fortiori* for French aristocrats in the late 18<sup>th</sup> century, Russian in the early 20<sup>th</sup>. Even short of stock market collapse or revolution, there are multiple ways in which I could suddenly find myself in a much worse situation, such as a fraud at my broker’s that emptied my portfolio. Any money saved today

through habits of thrift would vanish along with everything else, but the habits would not. Even if I am safe through my lifetime, my children extend my concern decades further, and their pattern of life will be in part modeled on mine.

In the world as it now is, most things I want done can be done better and cheaper by someone else, hence it pays to specialize, earn money doing what I am good at, use that money to get other things through the market. That mechanism makes possible for modern-day people a standard of living enormously higher than a self-sufficient homesteading household could produce with its own labor.

The world is an uncertain place. As long as I am alive and without serious injury I have my mind, my hands, my skills. In an uncertain future, there might come a time when I had no access to a market — perhaps not for a day, a month, or, in an extreme case of societal collapse, a lifetime. Modern Americans have lived in a safe world for a very long time, but past performance, as they say, is no guarantee of future returns. There might come a time when I could no longer support myself by teaching, writing, speaking, perhaps a time when I would need to flee my country and find other ways of making a living. Safer not to be a one trick pony.

I conclude that while it makes sense to do most things through the market — I do not grow my own wheat and grind it for flour or spin and weave my own cloth — there is much to be said for maintaining a range of skills, the sort of range Heinlein describes if not his exact list. Just in case.

Insofar as being to some degree a generalist is prudent, it is admirable. Insofar as it is admirable, it is something one feels good about, wishes to demonstrate. By, for example, feeding forty people out of your kitchen or building your own bookcases.