# The Curse of Education

David Laibson

May, 2008

# 1 Competition is sometimes protective

- In many settings, competitive forces educate consumers.

- If David mistakenly believes that Windows is a good operating system, Apple will run advertisements correcting him.

## 2 Competition need not be protective

- Firms do not have an incentive to educate or debias consumers if debiased consumers are not profitable

- "Curse of education": educating the consumer makes her unprofitable.

Examples of education that will make a consumer unprofitable:

- “If you buy this large house, you will be spending too much of your income on housing. Stay in your old house.”

- “If you extract more home equity (and spend it on current consumption) you will be spending too much of your income on interest. Don’t take out this home equity loan.”

- “If you refinance now, you will give up a valuable option to refinance in the future. Don’t refinance now.”

# 3 Shrouded attributes

Gabaix and Laibson (QJE, 2006)

- Many contracts/goods have "shrouded attributes" that some people don't fully consider.

- Buying a printer

  - Some consumers only look at printer prices.

  - They don't look up the cost of cartridges.

- Taking out a mortgage
  - Some consumers focus on the current interest rate
  - And underweight expected future interest rates

## 3.1 Shrouded attributes

- Mortgage fees, including closing costs (Woodward 2003).

- Credit card fees and long-term interest rates (Ausubel 1990, Agarwal et al 2006).

- Mutual fund fees: Most individual investors report that they do not know the fees that they are paying (Alexander et al. 1998, Barber et al. 2002).

- Printer cartridges: only 3% of printer buyers report that they knew the ink price per page when they bought their printer (Hall 2003).

- Hotels (phone fees), banking (minimum balance fees), video stores (late fees) (Ayres and Nalebuff 2003, Ellison 2005).

## 3.2 Mortgage Illustration

- For the purposes of illustration, consider a market with perfect competition.

- Consumers fully weight up-front costs and underweight shrouded costs

$$\text{Total value of buying house} = V$$

$$\text{Total perceived cost of mortgage} = p + \beta p_s$$

- $0 < \beta \leq 1$

- Assume that only so much cost can be shrouded: $p_s \leq \overline{p}_s$

- Assume that economic cost of providing loan is $c$.

- In competitive equilibrium:

$$c = p + p_s$$

- Firms minimize the perceived cost of their loans:

$$p_s = \overline{p}_s$$

$$p = c - \overline{p}_s$$

- Equilibrium is inefficient if

$$c > V > p + \beta p_s$$

$$c > V > c - (1 - \beta)\,\overline{p}_s$$

- Equilibrium is inefficient if

$$c > V > c - (1 - \beta)\,\overline{p}_s$$

- If $\beta = 1$ all future costs are fully perceived and inefficiency vanishes.

$$c > V > c$$

- Average dead weight loss (for consumers with a positive dead weight loss):

$$\frac{(1 - \beta)\overline{p}_s}{2} = \frac{(\frac{1}{4})(\$40,000)}{2} = \$5,000$$

Consumer education is not profitable.

- Unshrouding costs will not win any business, since *perceived* costs rise with unshrouding.

- Unshrouding costs can only lose business for the transparent firm.

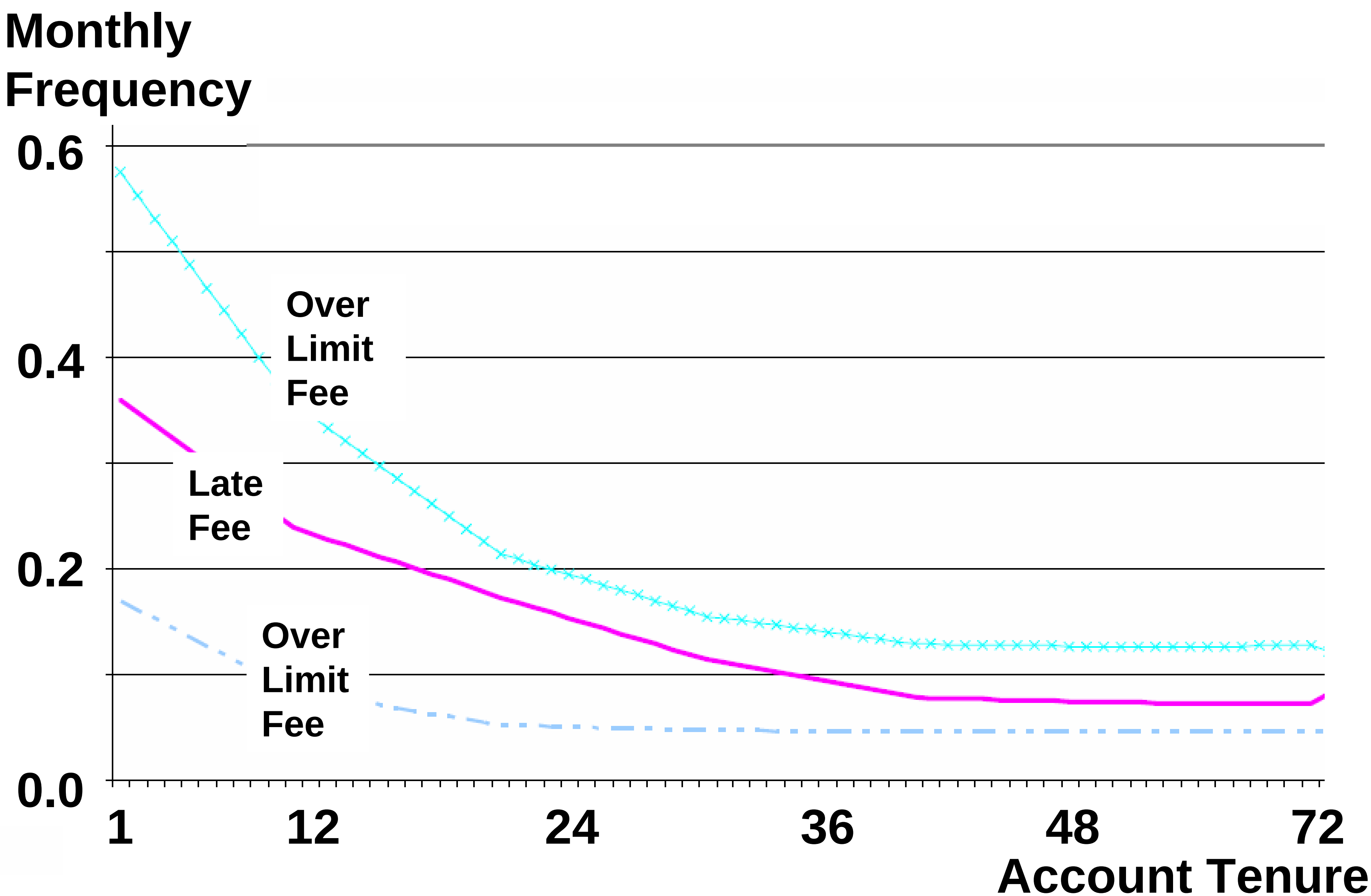
Measuring shrouding?

- Consumer surveys

- Structural estimation of normative optimum

- Learning dynamics

# Learning to Avoid Fees in the Credit Card Market
## Agarwal, Driscoll, Gabaix, and Laibson (2008)



Can the market for advice ameliorate such problems?

- The advice market functions poorly.

- Problem 1: it's hard to separate good advice from bad advice.

- Problem 2: in many circumstances, most of the advice is bad (conflicted, or just plain wrong)

Example of a market for advice: Refinancing.

Agarwal, Driscoll, Laibson (2008)

- Study refinancing advice recommended by 25 leading books and websites.

- None of these sources provide a calculation of the optimal refinancing differential.

- The break-even NPV rule is the only theoretical benchmark.

- Most of the advice boils down to the following necessary condition for refinancing – only refinance if you can recoup the closing costs of refinancing in reduced interest payments.

# 4 Regulation

- Solution I: publicly provided consumer education (teach consumers to look for shrouded costs)

- Solution II: regulated transparency (force firms to stop shrouding)

- Skeptical of I (education) and II (unshrouding) on empirical grounds.

# SEC disclosure study

## Beshears, Choi, Laibson, Madrian (2008)

- Harvard staff were asked to allocate a hypothetical portfolio of $100,000 among equity and bond funds
- Two randomly assigned treatment groups
  - One treatment group given statutory prospectuses
  - Second group given SEC's proposed "summary prospectus"
    - "A result should be disclosure that is layered in a manner that allows each mutual fund investor – and each intermediary, analyst and other user – to quickly find and use the information that he or she needs and wants"

      Director of SEC division of investment management
- Investment horizon either 1 month or 1 year

# Summary Results

- Fees include (amortized) front load, back load, expense ratio

- Annual horizon

| | Statutory Prospectus | Summary Prospectus |
|---|---|---|
| Fee-minimizing choice | **1.82%** | **1.82%** |
| Mean fee actually paid | **3.73%** | **3.71%** |

- Month horizon

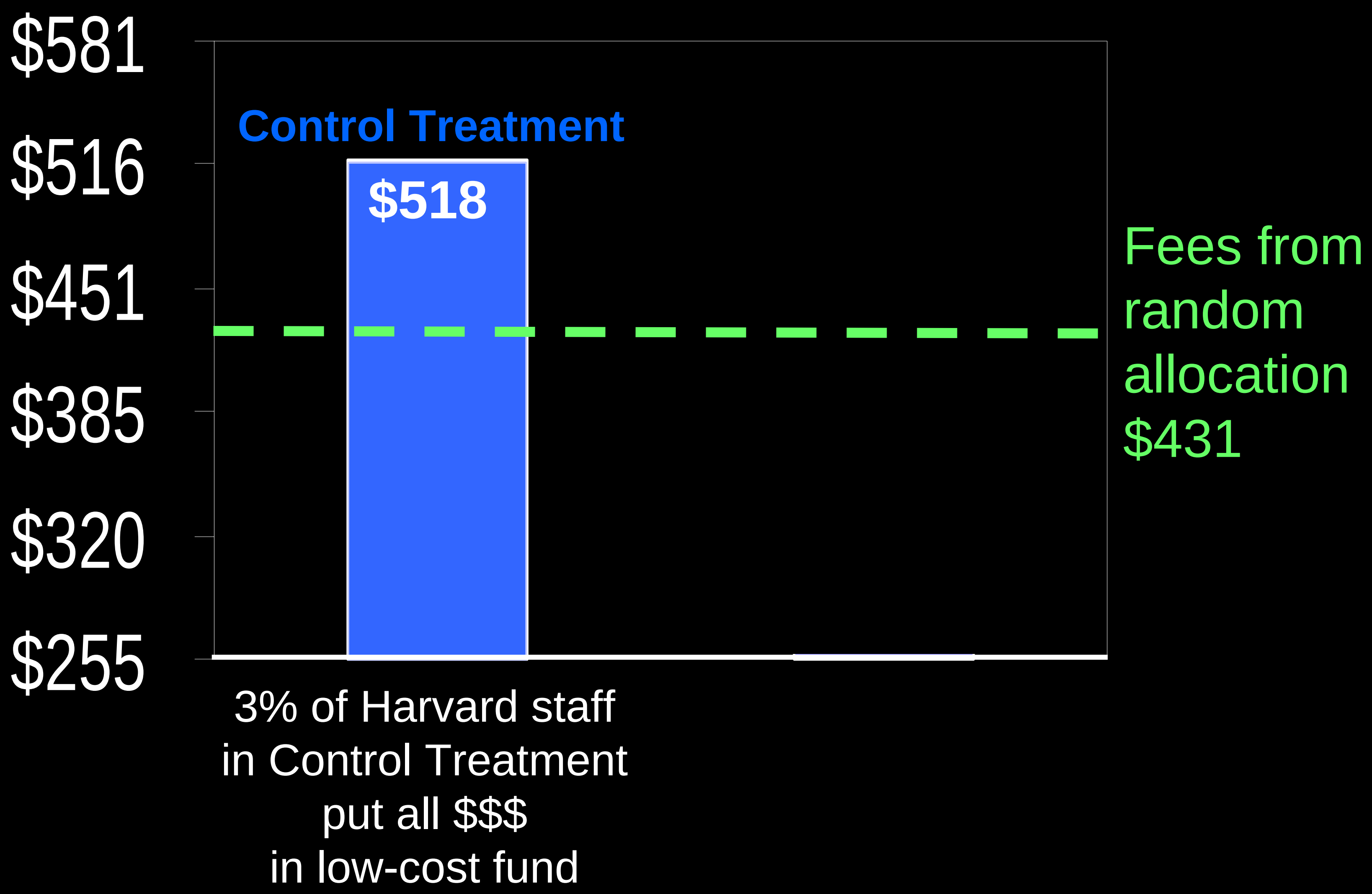
| | Statutory Prospectus | Summary Prospectus |
|---|---|---|
| Fee-minimizing choice | **1.15%** | **1.15%** |
| Mean fee actually paid | **2.96%** | **3.07%** |

# Fee insensitivity

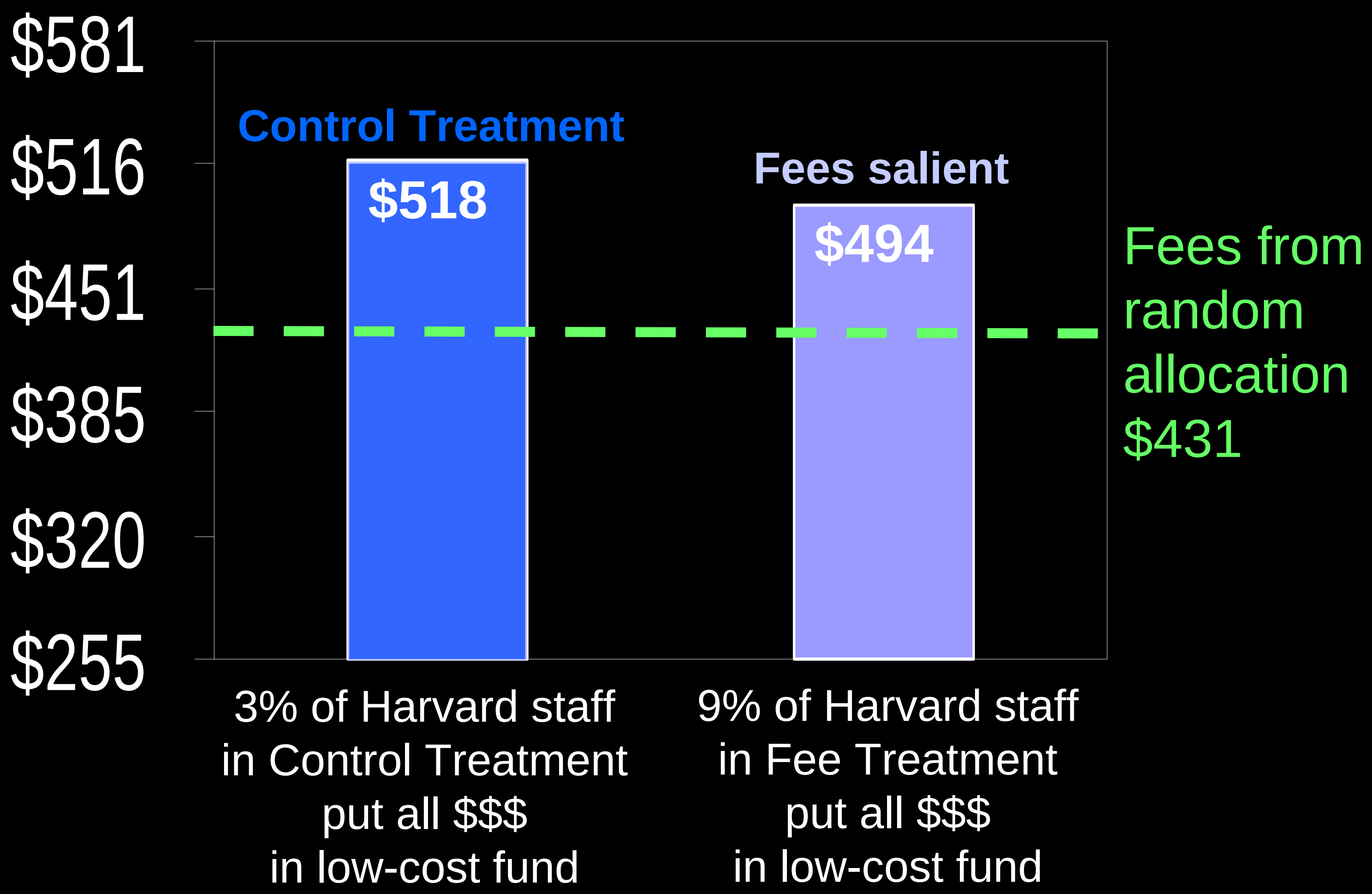
**Choi, Laibson, Madrian (2007)**

- **Experimental study with 400 subjects**
- **Subjects are Harvard staff members**
- **Subjects read prospectuses of four S&P 500 index funds**
- **Subjects allocate $10,000 across the four index funds**
- **Subjects get to keep their gains net of fees**

# Data from Harvard Staff



# Data from Harvard Staff



- Disclosure does not lead people to choose low fee mutual funds (even when the choice is among index funds).

- Would better disclosure work in the mortgage market?

- Is there some educational intervention that would work?

- A series of educational studies that I have coauthored with John Beshears, James Choi, and Brigitte Madrian has led me to be skeptical that educational interventions pass basic cost-benefit tests.

- We need to study proposed interventions/education/disclosure in controlled experiments (in the field or in the lab) before we make them national policy.