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**Behavioral Public Finance**

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# Behavioral Public Finance

Edward J. McCaffery

## Abstract

These are slides from a presentation to the Gruter Institute for Law and Behavioral Research, Squaw Valley Conference, May, 2008 (at which event Michael Jensen got me to agree to post these slides as a pdf on SSRN . . . ).

The task is to give an overview of what I hope to be an emerging field of behavioral public finance. Behavioral finance, as per Barberis and Thaler 2003 (and others), consists of two parts: (1) individual level heuristics and biases, which can lead to sub-optimal (inconsistent) judgment and decision-making, and (2) institutional arbitrage mechanisms. In private finance and economics, these latter, most importantly competition and markets, act to reduce and perhaps eliminate the “harms” from the former. Hence we get the relatively modest policy recommendations characteristic of Sunstein and Thaler’s Nudge (among many other examples), such as for default rules that set participation in 401(k) plans. In public finance, in contrast—and arguably in all sectors of the economy where there are not flourishing markets (such as among the poor?)—there are no obvious arbitrage mechanisms. Politicians and the political processes can even exacerbate persistent cognitive error: consider the predilection for hidden taxes, such as the corporate tax. Behavioral public finance is a hugely important subject matter.

These slides, summarizing original research done with Jon Baron of Penn (see the survey piece, McCaffery and Baron 2006), explain the general setting; group together many biases under a common isolation effect, and then use Kaplow and Shavell 2002’s model of optimal legal system design, tracking the two welfare theorems—i.e., set rules (including, we argue, public finance rules), so as to maximize wealth or serve efficiency, and then redistribute from the greater social pie via the tax system—to suggest the possible problems for a democracy. These include: (a), leaving wealth on the table, because the optimally psychologically pleasing policy is not the most efficient one; (b) pitting equity or redistribution

against efficiency, unnecessarily, because support for redistribution depends on the purely formal aspects of public finance; and (c) allowing skilful politicians to affect preference reversals among the citizenry, by agenda setting and framing, as by getting citizens averse to deficits and in favor of government expenditures to cut taxes, today, by isolating tax cuts from spending programs.

# Behavioral Public Finance

Ed McCaffery  
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Gruter Institute for Law & Behavioral Research  
Squaw Valley Conference  
May, 2008

# Overview

- Task of BPF
- Unifying Principle: Isolation Effect
- Examples
- Why it Matters
- What is to be Done?

# Task of BPF

- Behavioral Finance
  - Heuristics and biases, plus
  - Arbitrage mechanisms
    - Competition and market itself (Smith's invisible hand)
      - E.g., marginal cost pricing
    - Note on Paige Skiba's work on "pay day loans," ([http://law.vanderbilt.edu/faculty/faculty-detail/index.aspx?faculty\\_id=22](http://law.vanderbilt.edu/faculty/faculty-detail/index.aspx?faculty_id=22)) and consider marginal social areas where markets don't flourish?
  - See generally Barberis and Thaler 2003

# Task of BPF

- Behavioral **Public** Finance
  - Same heuristics and biases, *without*
  - Markets (or competition)
    - Query, will politicians maximize wealth or utility, or exploit biases?
      - Suffer from biases themselves?
        - » Blind leading blind?
    - Where there is competition, it is for votes and popularity, not collective wealth
    - Compare hidden costs in mutual funds (e.g., bid-ask spreads) with hidden taxes
  - See generally McCaffery and Baron 2006, McCaffery and Slemrod 2006
    - Note all empirical work here is joint with Jon Baron of Penn Psychology

# Unifying Principle: Isolation Effect

- We make decisions looking at parts of whole, as if with blinders on, ignoring logically relevant information “offstage”
  - Neural, evolutionary bases
  - Others call focusing effect
- See (or not) Michael Shermer’s gorilla
  - Note to non attendees” Michael is the founder of the Skeptics Society, a delightful and charming man, and he showed us a video of students passing around a ball wherein, by focusing on counting the number of passes, we are missed that a gorilla appeared and danced in the midst of the video. Excellent example of focusing effect . . . .



# Examples

- Metric and Schelling Effects
- Disaggregation Bias (Humpty Dumpty)
- Masking Redistribution
- Starving the Beast
  
- Note on within-subject, Web based design
- Also note, quality of slides may be poor, due to my primitive Web capture technique; see McCaffery and Baron 2006 (or version available on SSRN, [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=567767#PaperDownload](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=567767#PaperDownload)), for underlying detail and better graphics.

# Metric and Schelling Effects

\$25,000	\$50,000	\$100,000	\$200,000
<b>Answer in dollars:</b>			
9.3	11.7	15.2	16.8
<b>Answer in percent:</b>			
9.2	13.0	18.8	24.6

Table 2: Mean fair taxes (in percent) as a function of income.

# Disaggregation Effect

Given rates on:					Response:				Mean
					Dollars		Percent		
\$20k	\$40k	\$80k	\$160k	\$320k	Total	Other	Total	Other	
Payroll tax given, Income tax response									
0	0	0	0	0	14.97	14.60	17.56	16.90	16.01
0	5	10	15	20	14.89	21.13	17.60	23.68	19.32
5	10	15	15	15	15.25	21.68	17.20	24.28	19.60
10	10	10	5	5	15.28	18.84	17.55	22.51	18.54
Income tax given, Payroll tax response									
0	0	0	0	0	15.66	13.24	17.02	16.15	15.52
0	5	10	15	20	15.44	20.35	17.13	22.01	18.73
0	8	16	24	32	16.00	24.13	17.79	27.36	21.32
10	10	10	10	10	14.75	18.71	16.92	22.11	18.12
Mean:					15.28	19.09	17.35	21.87	

Table 3: Total taxes in percent.

# Disaggregation Effect

Given rates on:					Response:				Mean
					Dollars		Percent		
\$20k	\$40k	\$80k	\$160k	\$320k	Total	Other	Total	Other	
Payroll tax given, Income tax response									
0	0	0	0	0	3.73	4.47	5.99	5.99	5.05
0	5	10	15	20	3.89	7.38	5.85	9.20	6.58
5	10	15	15	15	3.83	5.75	6.03	7.16	5.69
10	10	10	5	5	3.80	2.70	6.05	5.43	4.50
Income tax given, Payroll tax response									
0	0	0	0	0	4.46	3.74	6.11	5.61	4.98
0	5	10	15	20	4.26	6.53	5.85	8.33	6.24
0	8	16	24	32	4.30	9.20	5.76	10.95	7.55
10	10	10	10	10	3.76	3.31	5.67	5.68	4.60
Mean:					4.00	5.39	5.91	7.30	

Table 4: Graduation (tax change for each step) as a function of aggregation frame

# Masking Redistribution

Table 5: Mean responses and inferred responses for presence and absence of health care, education, and social security










No cuts		
Top	33.6%	
Middle	22.5%	
Bottom	11.4%	
Three cuts, raw responses		
Top	18.9%	
Middle	7.5%	
Bottom	-3.9%	
Three cuts, responses plus out-of-pocket cost		
Top	23.4%	
Middle	19.5%	
Bottom	26.1%	

Table 5 shows the mean response of subjects, using the same type of graph they

# Starving the Beast

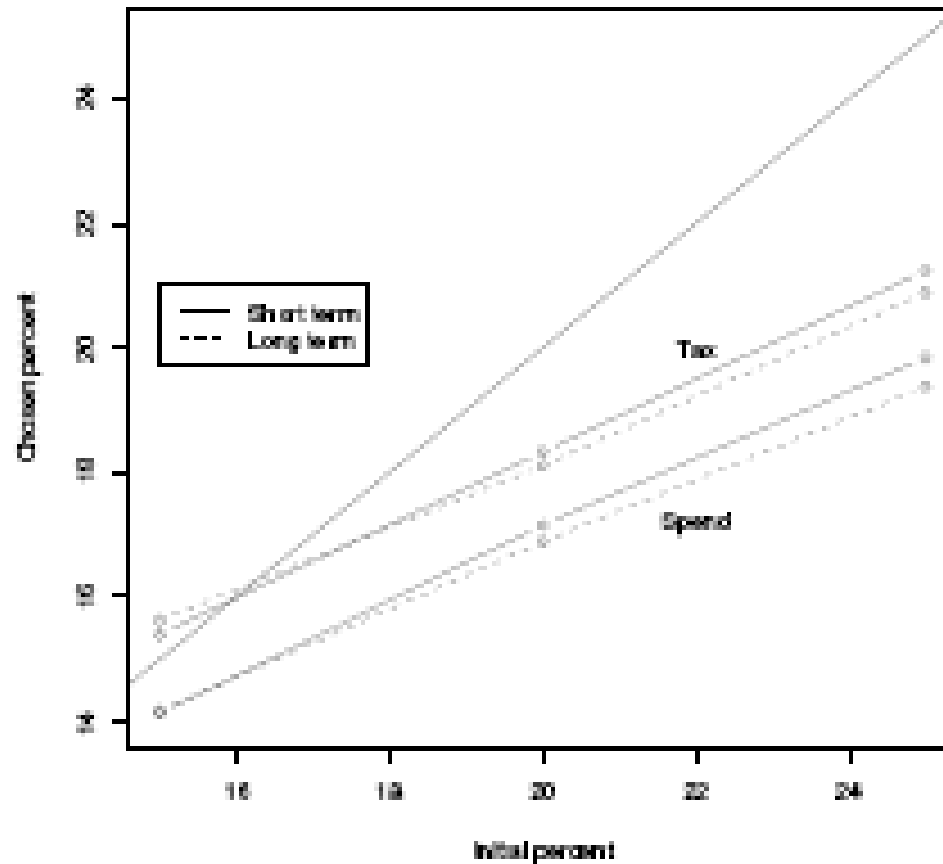


Figure 1: Preferred levels of taxation and spending, Experiment 1. (Diagonal line represents no change from starting point.)

# Starving the Beast

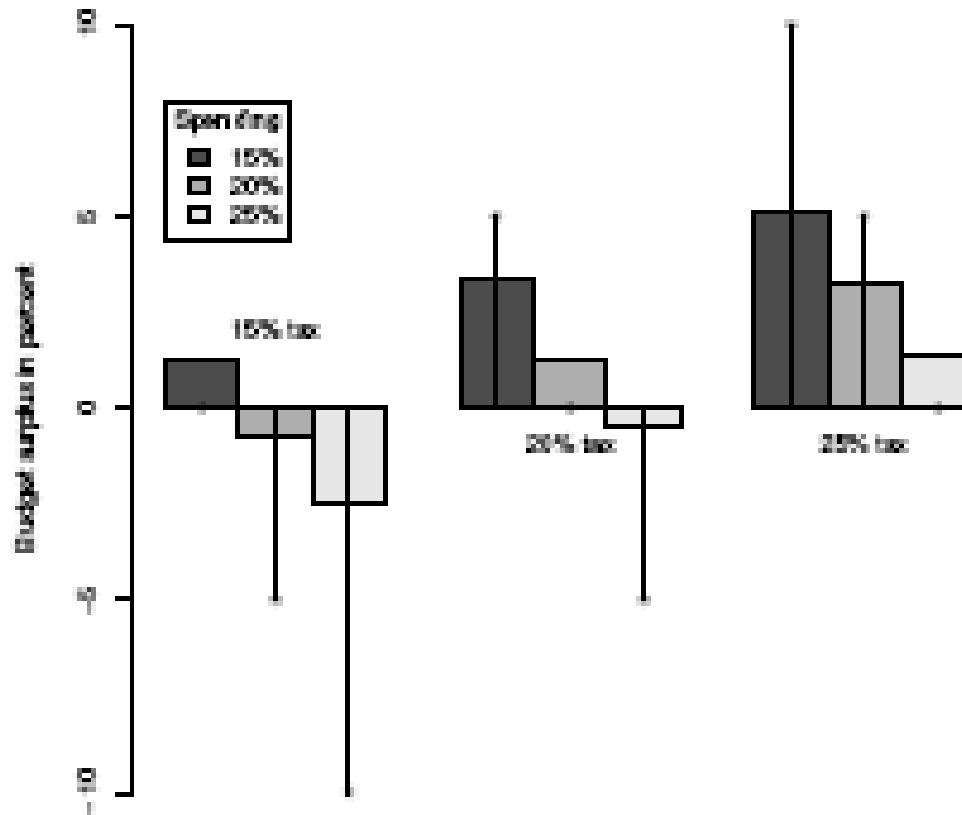


Figure 2: Budget surplus resulting from subjects' judgments as a function of initial level of taxation and spending. Lines represent starting points.

# Starving the Beast

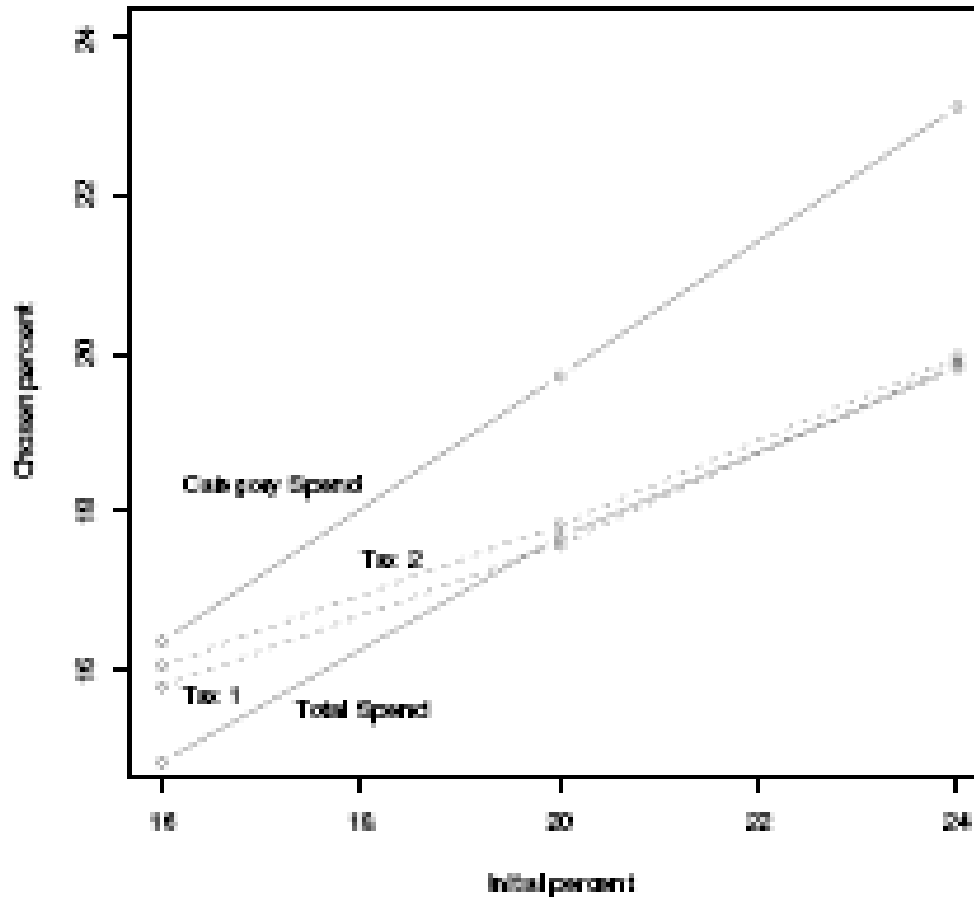


Figure 3: Levels of taxation and spending implied by judgments, Experiment 2. Taxation questions are dashed lines; Spending questions are solid lines.



# Starving the Beast

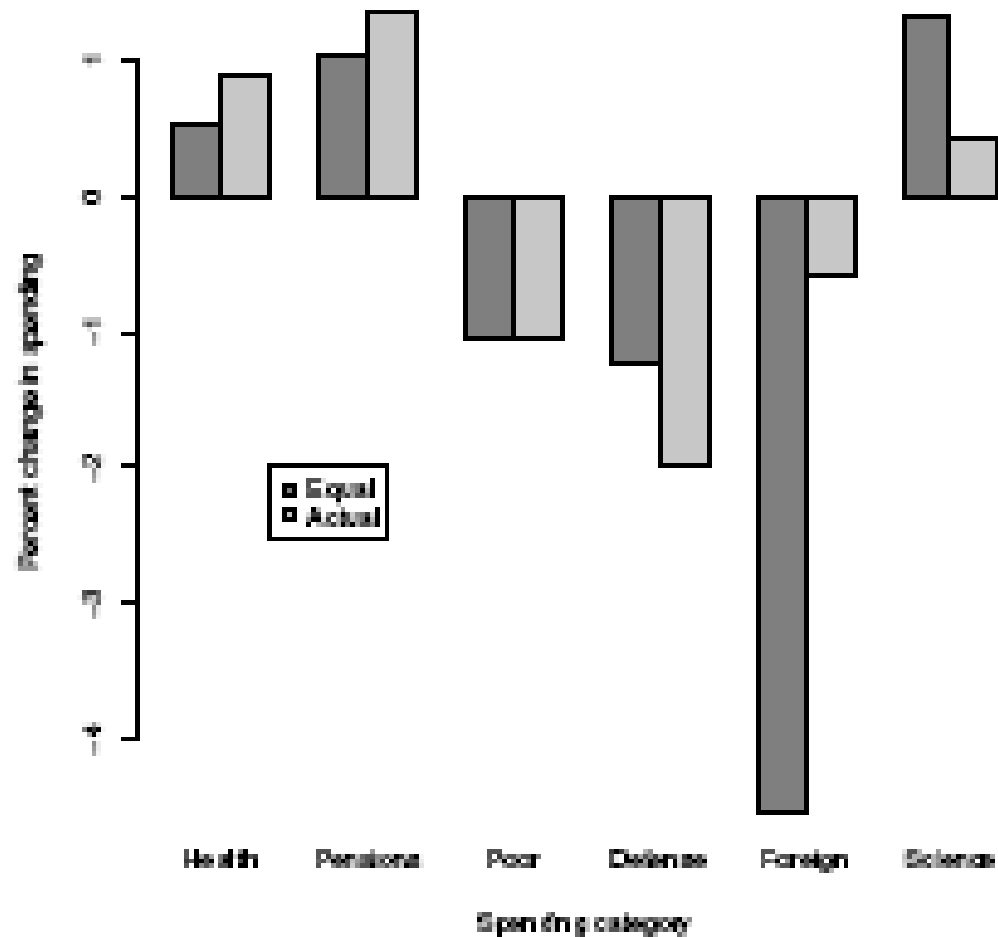


Figure 4: Category-spending changes, in percent of spending, calculated as if all categories were equal parts of the budget, or the actual percents given to the subjects

# Starving the Beast

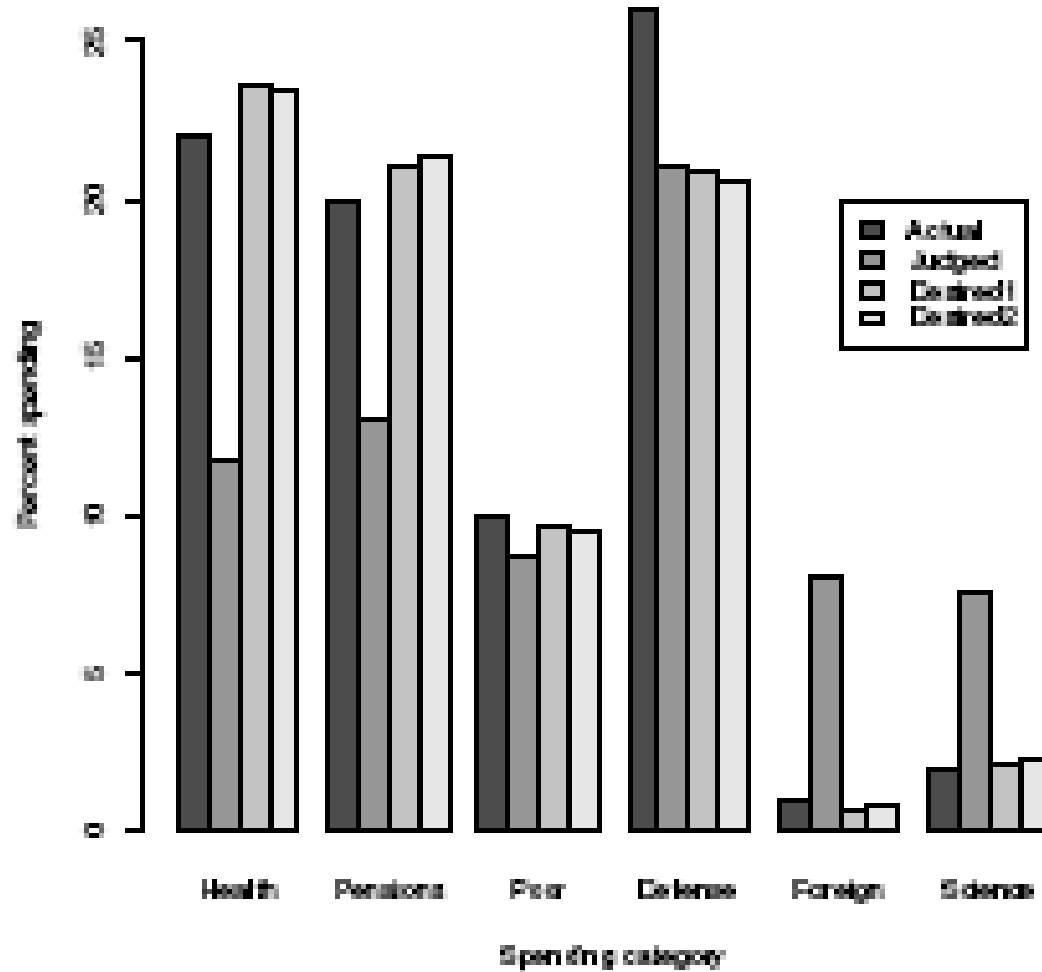


Figure 6 Allocations

# Why it Matters

- Optimal Public Finance
  - Two welfare theorems
    - Allocation and distribution
  - Maximize social pie, then redistribute
    - See Kaplow and Shavell 2002

# Why it Matters

- Three Problems
- One, Efficiency (wealth) may suffer
  - Politicians/taxpayers chose psychically pleasing but costly tax and spending programs
    - Wealth left on table as homage to cognitive illusions
      - Note, psychologically pleasing “hidden” taxes have real effects (rational analysis never irrelevant)
      - E.g., corporate tax as regressive wage/consumption tax

# Why it Matters

- Two, Unnecessary equity-efficiency tradeoffs
  - Amount of redistribution depends on form of public finance
    - E.g., masking, privatization effects
  - Hence, liberals and progressives (pro redistribution) will favor waste

# Why it Matters

- Three, Preference reversal brought about by agenda setting + isolation
  - Puzzle of why democracies don't redistribute
  - Starve the Beast
- Ordering:
  - Tax cut today (tax aversion)
    - Most salient taxes get cut
      - E.g., payroll tax never cut!
  - Creates deficits
  - Changes baseline and perspectives
  - Hence leads to spending cuts, curtailed growth . . . .

# What is to be Done?

- De-isolate
  - E.g., PAYGO, balanced budget amendments
- Make tradeoffs salient
- Role for experts/independent agents?
- Introduce competition into public finance?
  - Privatize aspects of finance?
    - Pitch for progressive spending tax, forthcoming U. Chicago Press book (McCaffery forthcoming) (thanks, David Pervin), note on “illusion of ownership” and Kevin McCabe work
- Debias? Educate? Pray?
  - Role for religion among skeptics?

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