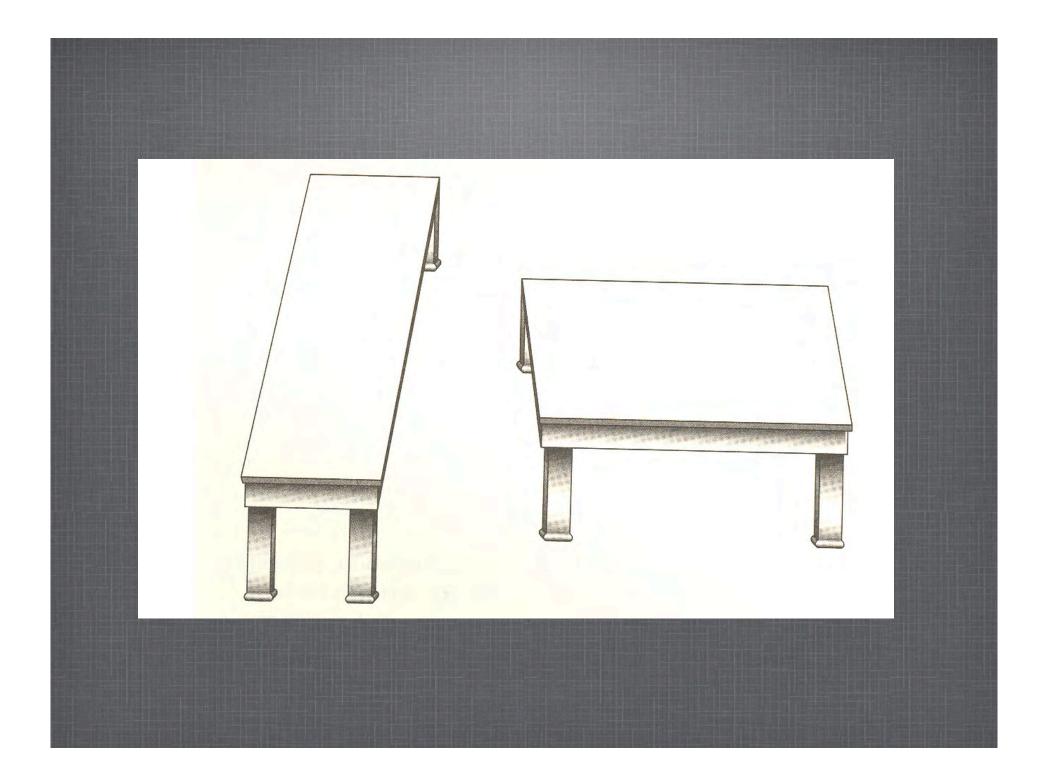
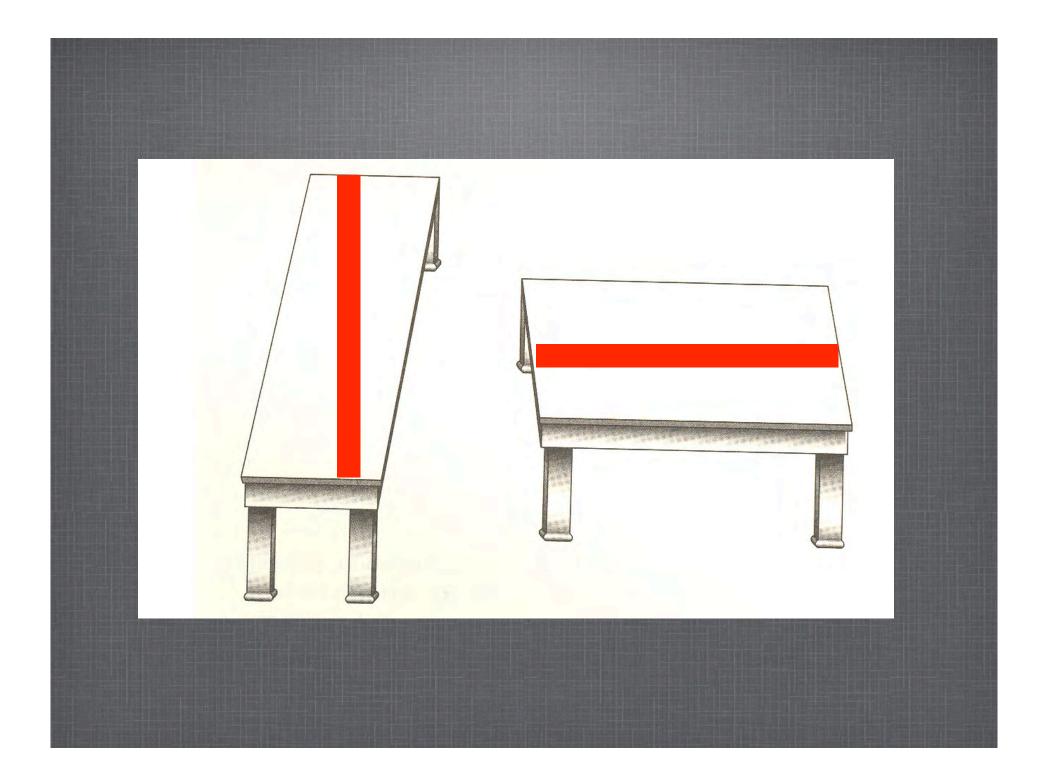
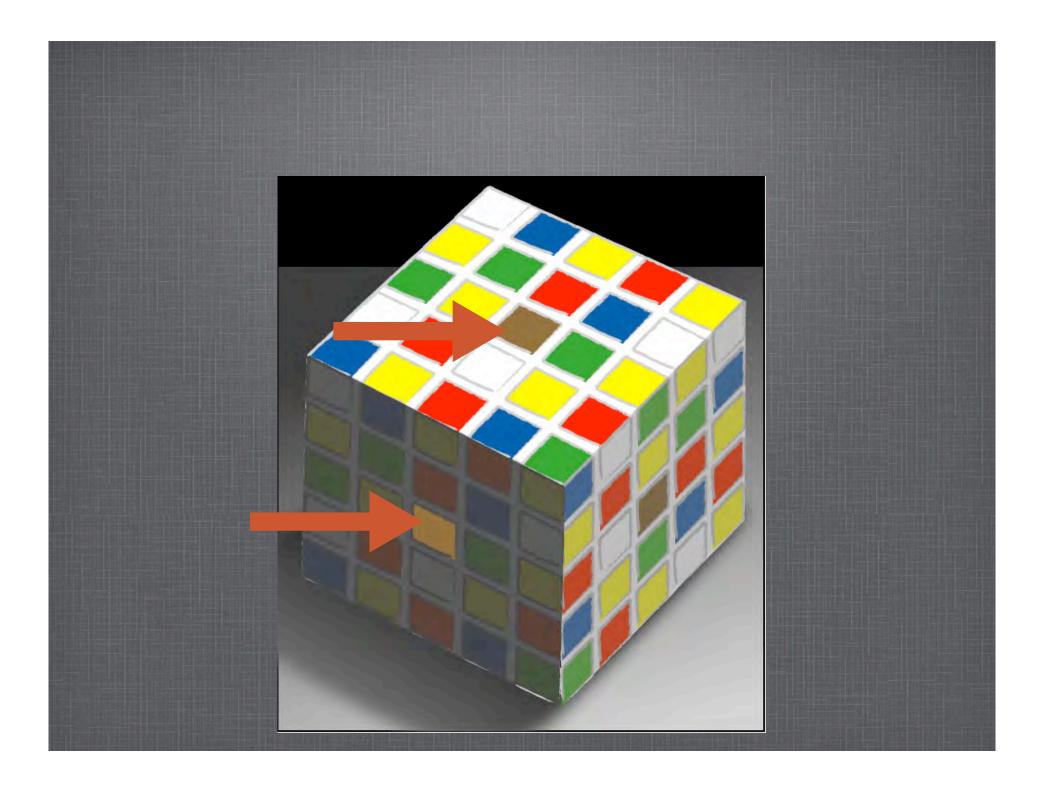
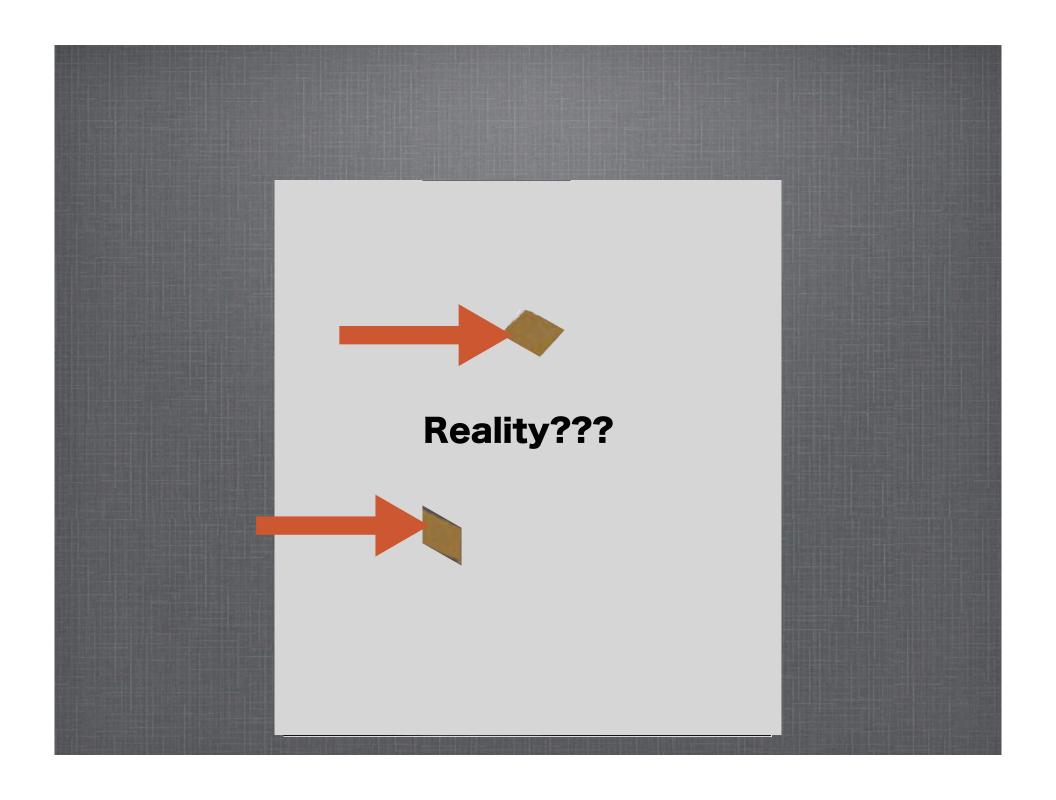


REALITY VS. SUBJECTIVE REALITY



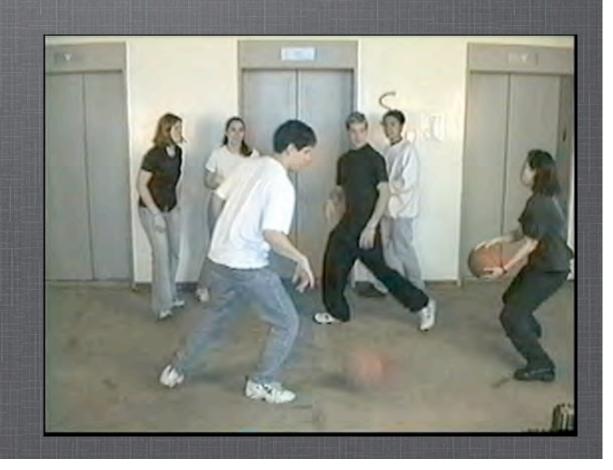






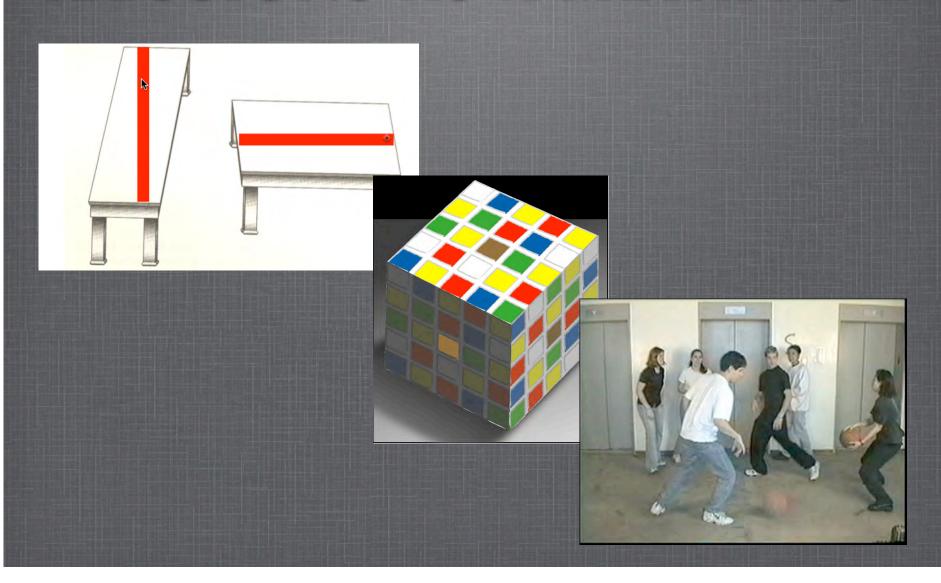
BASKETBALL

Count the # of times that the players in white pass the ball to each other





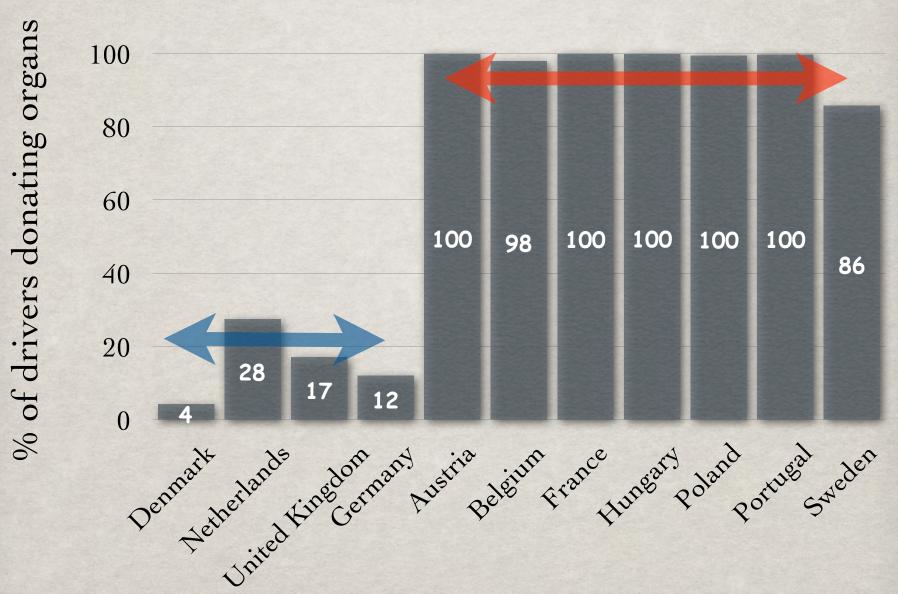
ILLUSIONS AS A METAPHOR





A FEW EXAMPLES OF "DECISION ILLUSIONS"

ORGAN DONATIONS?



Opt-in

Check the box below if you **want** to participate in the organ donor program

Opt-out

Check the box below if you **don't want** to participate in the organ donor program







THE JAM STUDY

	6 jams	24 jams
Approach	40%	60%
Try	1.4	1.5
Buy	30%	3%

THE POWER OF DEFAULTS

Defaults are a very powerful, yet largely an unrecognized force.

Defaults become even more important when there are many choices, or when the choice is complex.

Standard Economics ...

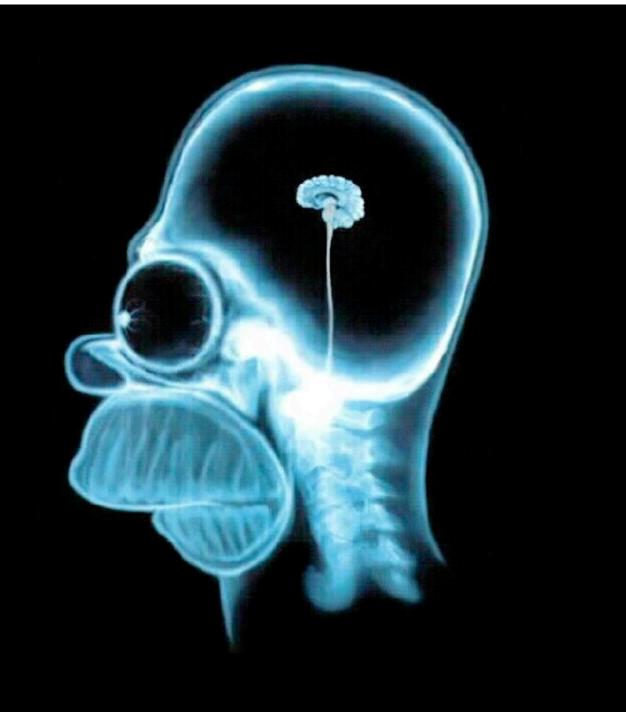
What a piece of work is a man! how noble in reason! how infinite in faculty! in form and moving how express and admirable! in action how like an angel! in apprehension how like a god!

Will Shakespeare (Act II, scene 2, of Hamlet)

Behavioral Economics ...

What a piece of work is a man! how roble in reason! how infinite in faculty! in form and moving how express and admirable! in action how like an angel! in apprehension now like a god!

Will Shakespeare (Act II, scene 2, of Hamlet)



IT IS ALL ABOUT

FREE LUNCHES!!!

PEOPLE DON'T KNOW THEIR PREFERENCES

MEASUREMENT
CHOICE CONSTRUCTION

ANSWER THE FOLLOWING:

Please write 3 reasons why you love your significant other

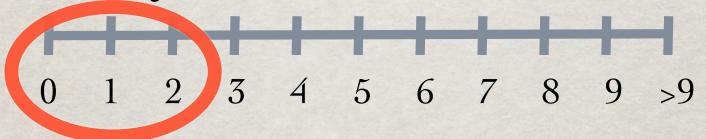
Please write 10 reasons why you love your significant other

Please write 3 reasons to buy a BMW

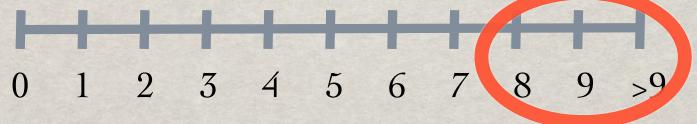
Please write 10 reasons to buy a BMW

ANSWER THE FOLLOWING:

Indicate on the following scale how many times do you floss a day:



Indicate on the following scale how many times do you floss a month:



Should you call the dentist to make an appointment?

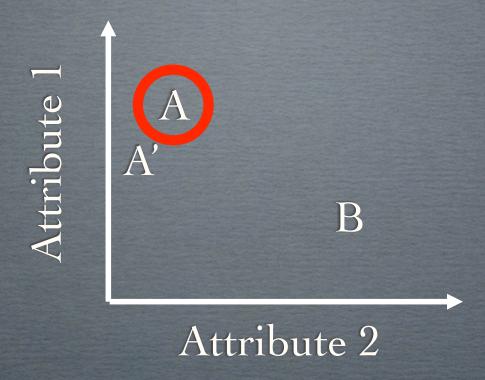
PEOPLE DON'T KNOW THEIR PREFERENCES

- Even preferences (opinions) about aspects of our life that we should be very familiar with can be modified!
 - * For example, based on answering a question
- ** A related point: market research: measuring, or forming opinions?

PEOPLE DON'T KNOW THEIR PREFERENCES

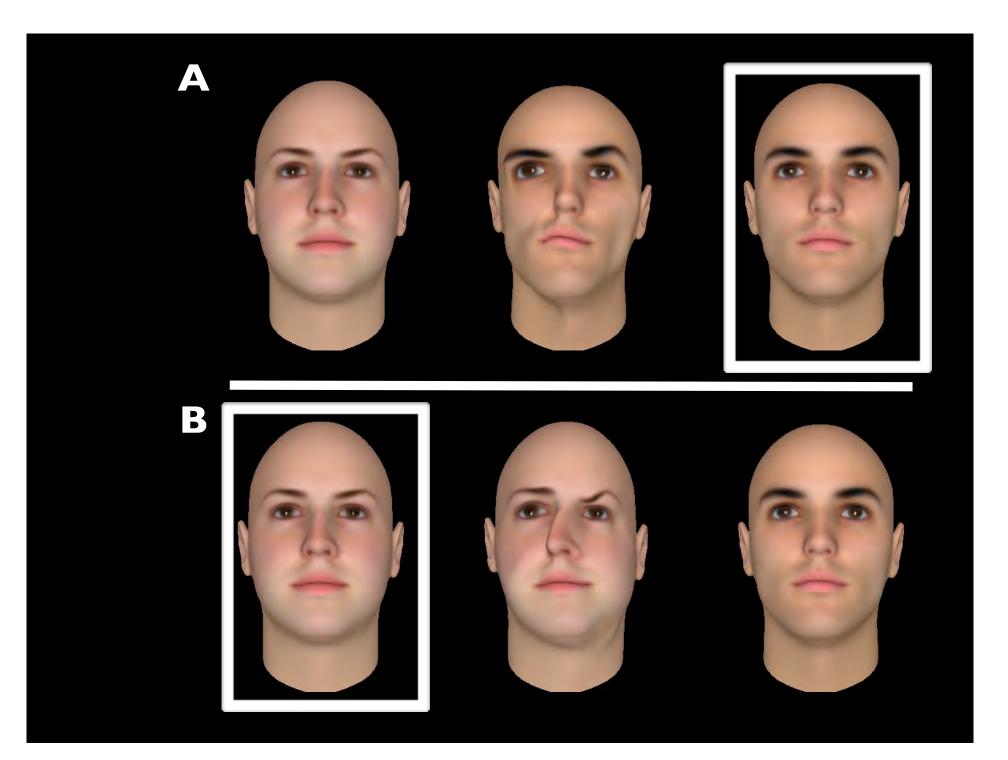
MEASUREMENT
CHOICE CONSTRUCTION

Asymmetric dominance



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DIVERSIONS	The Leananniae Since 1997.	
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	□ Print subscription - US \$125.00 One-year subscription to the print edition of <i>The Economist</i> .	0%
	□ Print & web subscription - US \$125.00 One-year subscription to the print edition of <i>The Economist</i> and online access to all articles from <i>The Economist</i> since 1997.	84%->32%



CONCLUSION

- People have an imprecise knowledge of their own preferences
 - Susceptible to influences from questions
 - Susceptible to influences from "frames"
 - Susceptible to influences from context
- ** Choice is difficult --> relative choice is simpler
- ****** Choice is constructed

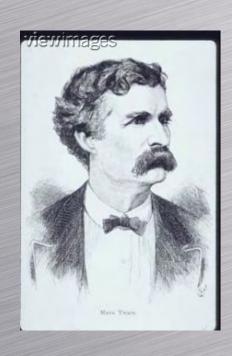
The value of 1st decisions

Auctions of real products

	Mean value	Low ss#	High ss#	Increase
Trackball	16.25	10.38	21.52	107%
Keyboard	32.47	21.81	42.03	93%
\$9 wine	15.80	11.62	19.55	68%
\$82 wine	22.89	17.42	27.76	59%
Design book	18.81	14.15	23.00	62%
Belgian Chocolates	13.31	10.04	16.24	62%

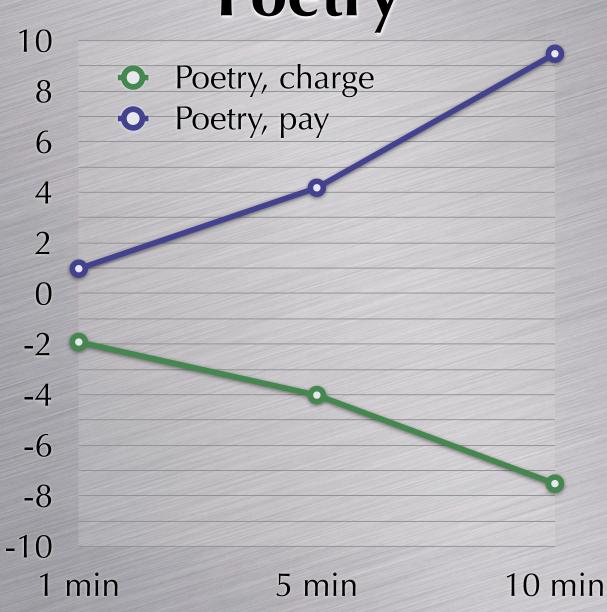
High dependency between the prices of the2 wines and 2 computer accessories

Tom Sawyer









How should people decide about buying a cup of coffee?



What is the self herding version of these decisions?





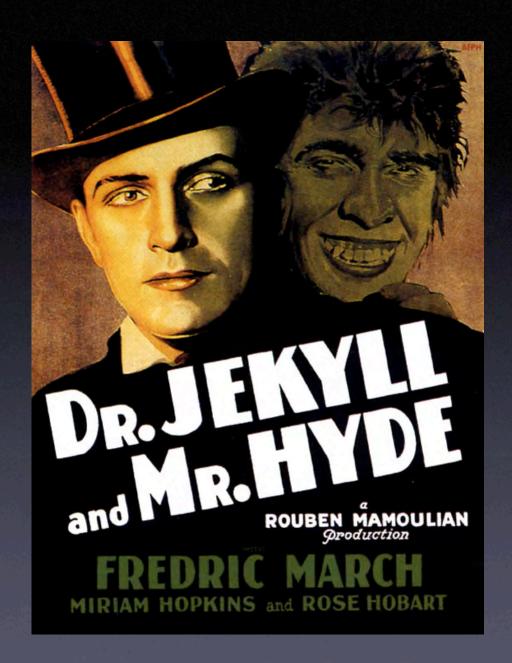


AMERICA RUNS ON DUNKIN'

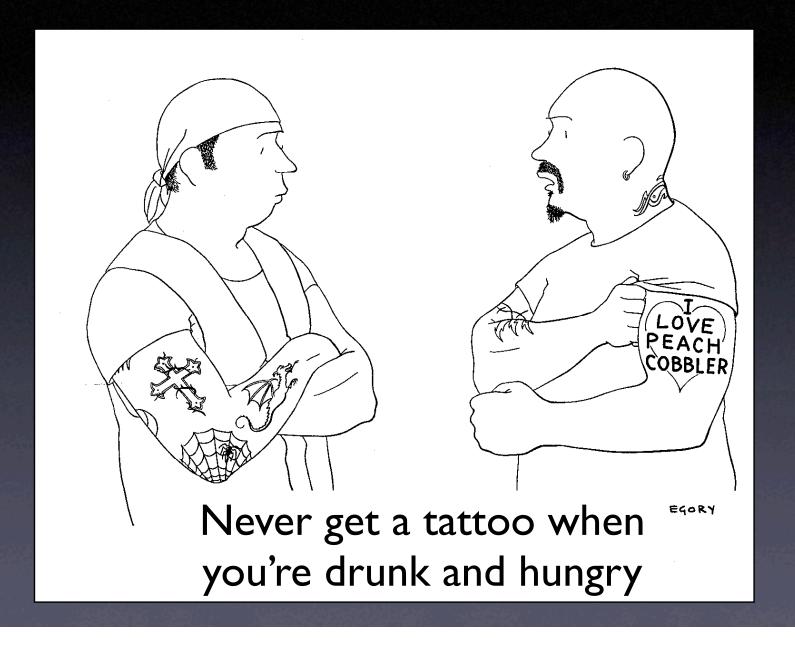
Arbitrary Coherence ...

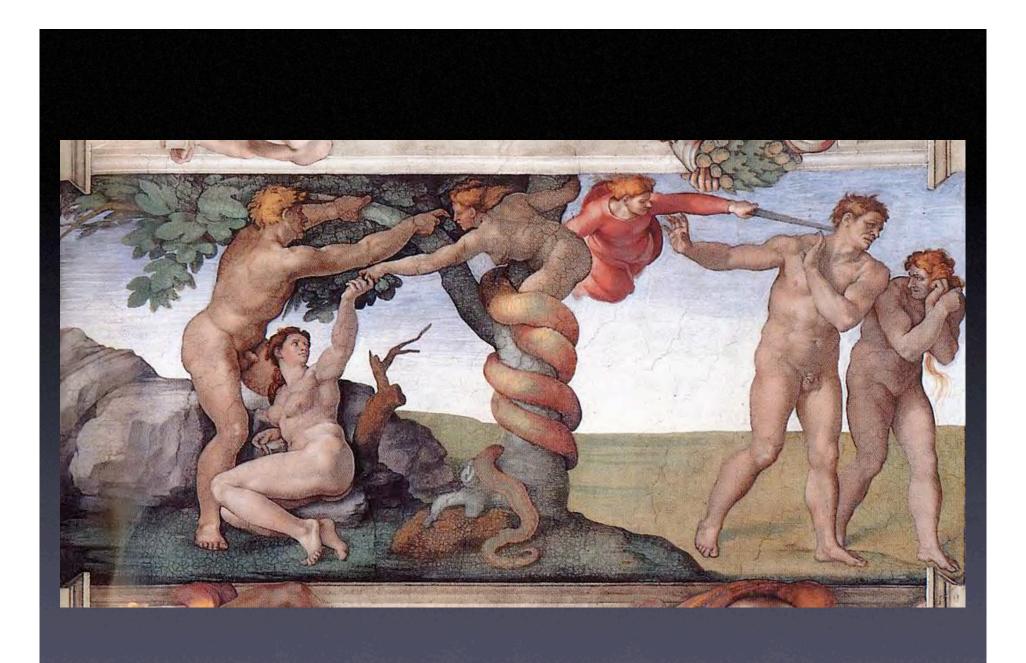
- First decisions are difficult
 - Particularly with money
- After first decision people use a "self herding" approach to making decisions
- This is how one decision can become a long-term habit

We are inherently & fundamentally emotional!



Hot & cold states



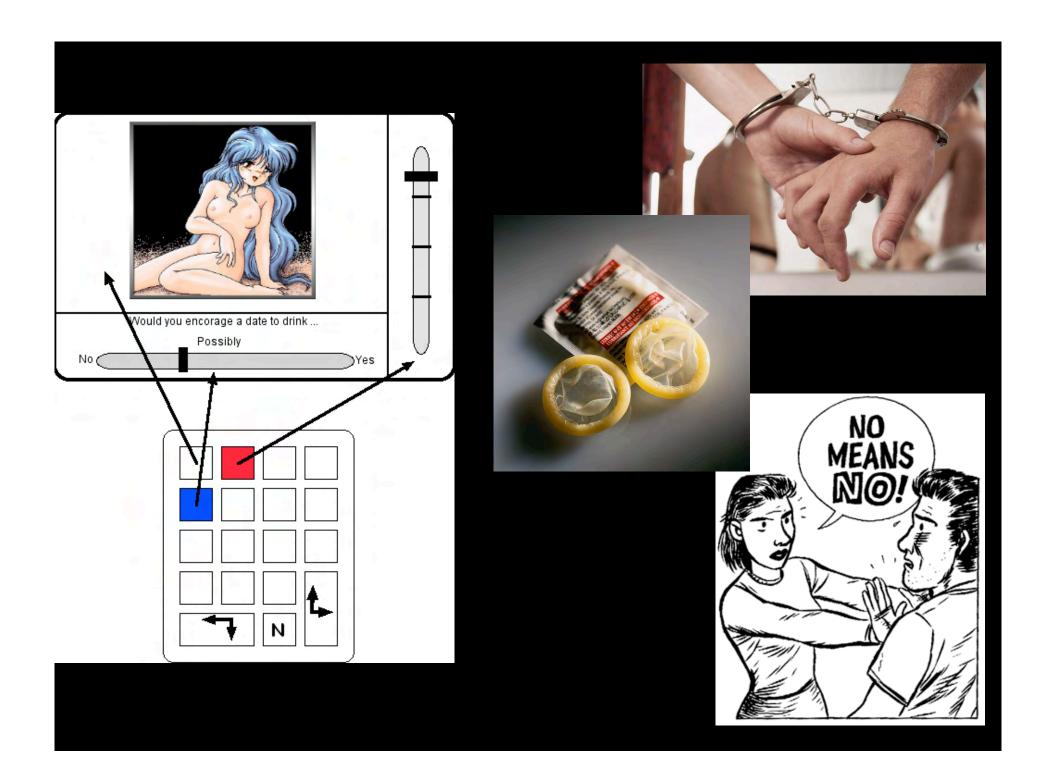


Hyperbolic discounting

More later

Less sooner

Value





Pelayed gratification & commitment

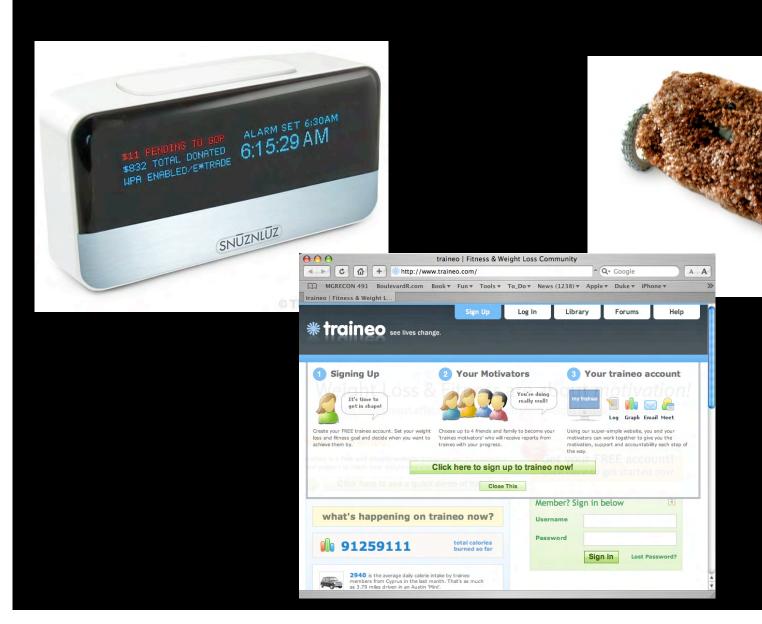


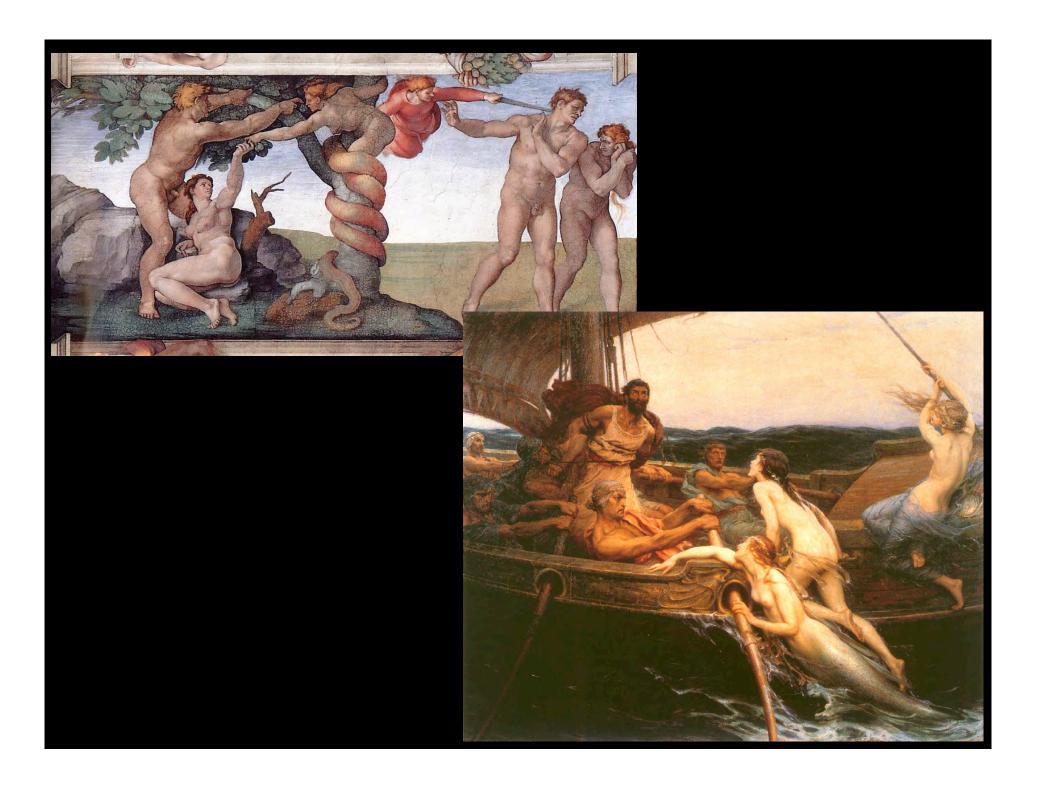






Free lunches!





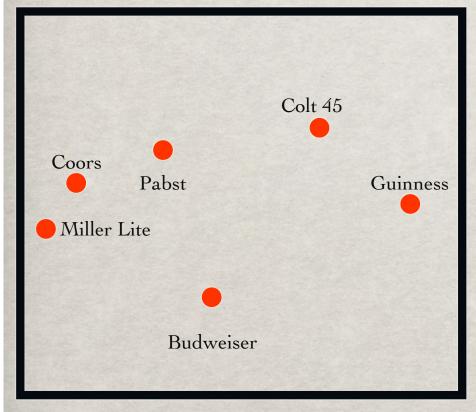
THE POWER OF EXPECTATIONS

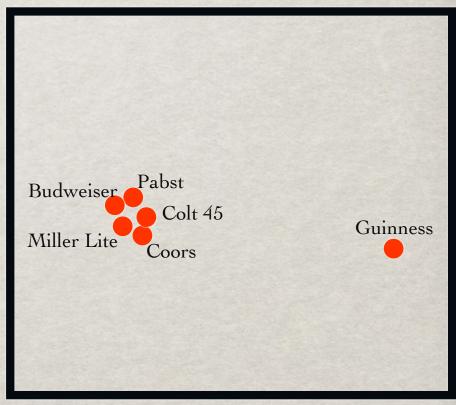




TASTE TESTS

Non-Blind Blind





COFFEE "WITH" ADD-ONS





* anise, nutmeg, clove, cardamom, etc

Expectations & beer: procedure



"Blind"



?

"Before"



?

"After"



B/+V

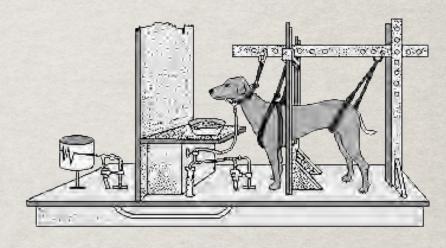
?

PRICE PLACEBO EFFECT



THE HISTORY OF MEDICINE IS THE HISTORY OF PLACEBO

PLACEBO & CLASSICAL CONDITIONING



CS

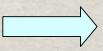
UCS

UCR

Learning Trial:





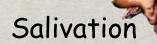




Test Trial:







CS

CR

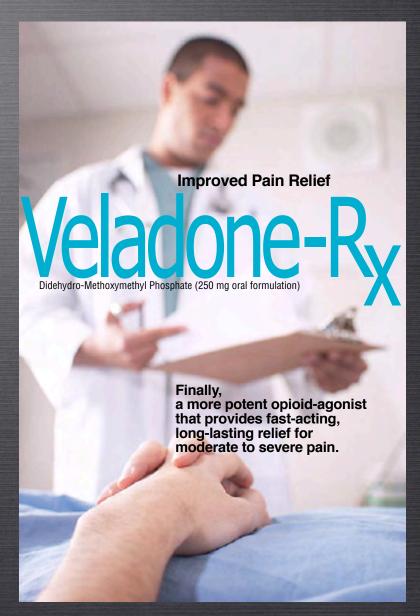
Endogenous opioids



"God's Own Medicine" Sir William Osler



A NEW EXCITING MEDICATION



OVERVIEW OF PROCEDURE

"DRUG REP" INTRODUCES MEDICATION

EXPERIMENTER CALIBRATES STIMULI

FIRST SET OF SHOCKS

PARTICIPANT INGESTS PILL

SECOND SET OF SHOCKS

QUESTIONNAIRE ADMINISTERED

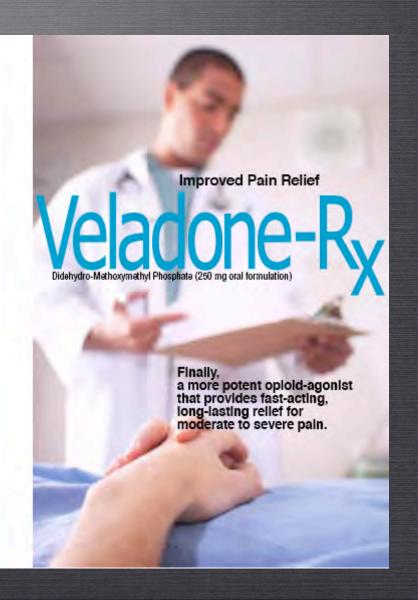
DEBRIEFING

BROCHURE PP. 1 & 4

Veladone is covered under most managed-care health plans.

Veladone is a product of Vel Pharmaceuticals, Xiaopin, China

To receive more information, please contact customer care via our website: http://onlinepharmacy.com.cn/Veladone-Rx/info.html



BROCHURE PP. 2 & 3

Vel Pharmaceuticals (1 Xiaopin, China, Veladone has proven highly effective in minimizing sain and allowing for increased patient mobility post-surgery.

Veladone is recommended for

moderate to severe pain, including pain from:

surgery muscle strains dental infection and oral surgery

Veladone is an exciting new medication in the opioid family (the same class of drugs as codeine and morphine). Veladone is more effective than these older drugs due to a reduced hepatic (liver) metabolism, which ensures faster absorption into the body.

Clinical studies show that over 92 percent of patients receiving Veladone in double-blind, controlled studies reported significant pain relief within only 10 minutes that lasted up to 8 hours.

Side effects of Veladone are generally mild and include lightheadedness, dizziness, and nausea. Veladone is not recommended for pregnant or nursing women, or for patients with advanced kidney or liver disease.

Warning:

Veladone should not be administered to patients who have previously exhibited hypersensitivity to other opioid-derived pharmaceuticals.

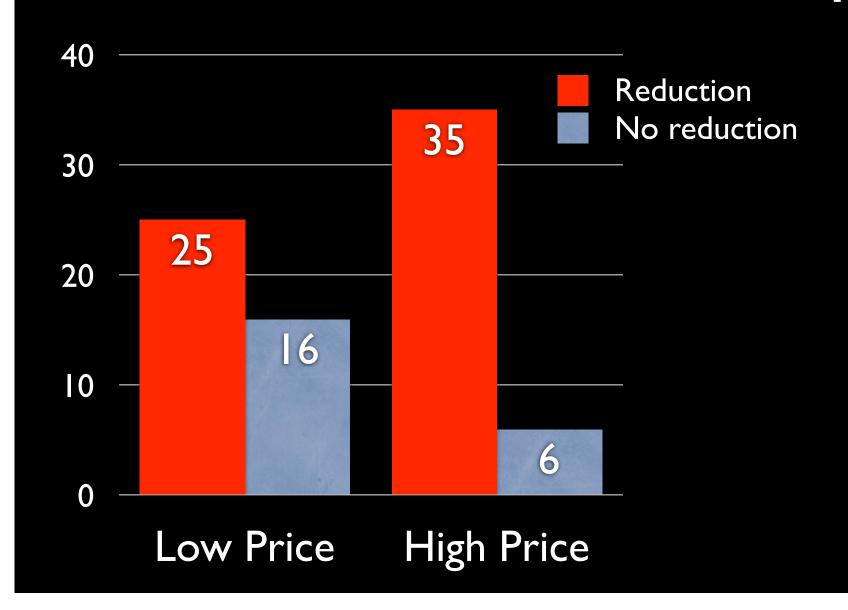
Dosage should be adjusted according to severity of pain and patient response. Veladone is to be taken orally. generally one tablet every 8 hours as long as pain persists. Veladone may be taken with or without food. Dosage may be adjusted by a physician according to severity of pain and patient response. Do not exceed 8 tablets in a 24-hour period.

Veladone is manufacty, ed and shippe from a temp vature-controlled, state-of-the-art fact ty in Xiaopin, China. It is av ilable by prescription exclusively from Spline Pharmacy (http://onlinepharmacy.com/cn/Veladone-Rx).

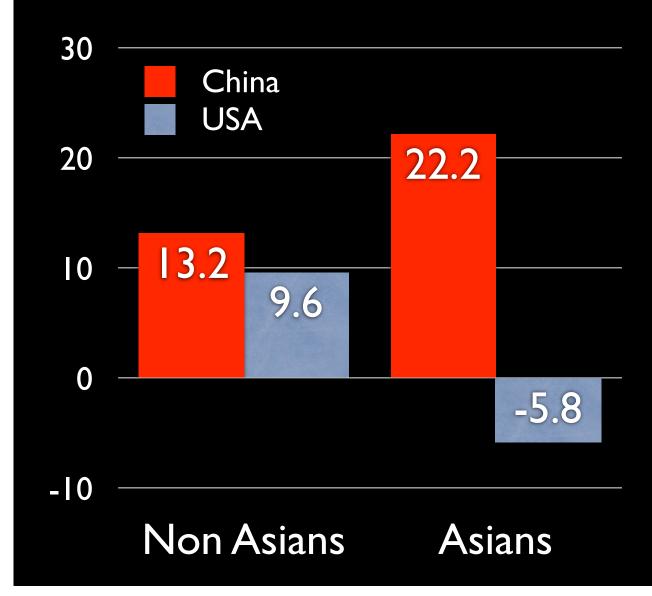
	COST	
1 Capsule	\$ 2.50 (+ \$1.25 shipping)	
6 Capsules	\$13.50 (10% discount of the single capsule price + \$1.25 shipping)	
12 Capsules	\$24.00 (20% discount of the single capsule price + \$1.25 shipping)	
24 Capsules	\$42.00 (30% discount of the single capsule price + \$1.25 shipping)	

Xiopin, China Cary, NC

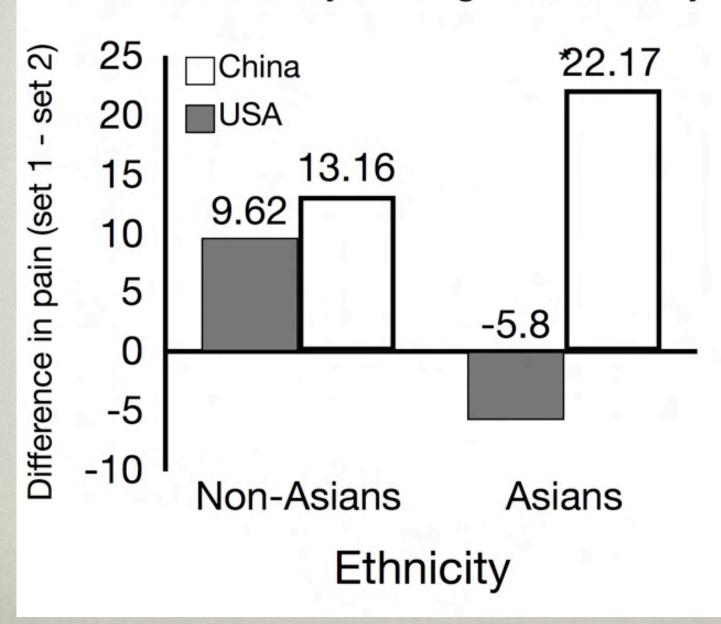
Pain reduction after the pill

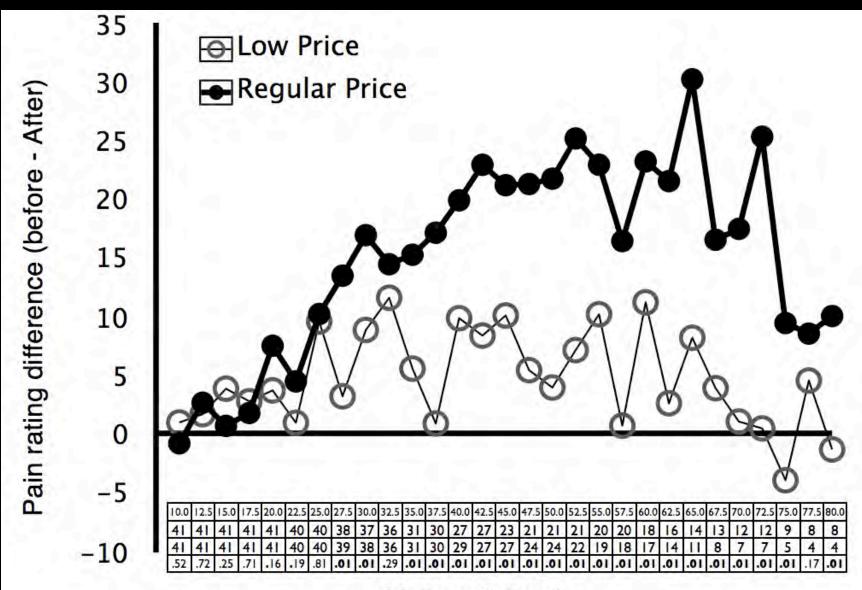


Effects of country of origin



Effect of country-of-origin & Ethnicity





Voltage intensity

OTC MEDICATIONS? A PILOT STUDY

I shall always be a flower girl to Professor Higgins because he always treats me as a flower girl and always will; but I know I can be a lady to you because you always treat me as a lady and always will.

—Eliza Doolittle, in Pygmalion by George Bernard Shaw

(Dis)Honesty





"'Honesty is the best policy.' O.K.! Now, what's the second-best policy?"



"Wait, those weren't lies. That was spin!"

External Rewards

Will decreasing the probability of being caught cheating affect the magnitude of deception?

```
1) In Greek mythology, who is the Goddess of
                                                    11) How long is a cosmic year?

    a) 189,792 earth years

   a) Athena
                                                        b) 225 million earth years
    b) Aphrodite
                                                        c) 1.73 billion earth years
    c) Hera
                                                    12) What is the formula for the circumference of
2) What is the 6^{th} digit after the decimal of \pi?
                                                    a circle?
   a) 9
b) 2
                                                        a) c = \pi r^2
                                                        b) c= 2πr
    c) 6
                                                        c) c = (\pi r^3)/4
3) How many continents are there?
                                                    13) What is the largest U.S. city in area?
                                                        a) Los Angeles, California
                                                        b) Juneau, Alaska
                                                        c) New York, New York
4) In The Wizard of Oz, what is Dorothy's last
                                                    14) How many people can be seated at Yankee
name?
                                                    Stadium?
    a) Danvers
                                                        a) 57,545
    b) Gale
                                                        b) 52,454
    c) Mae
                                                        c) 51,980
5) Which is the longest river in the world?
                                                    15) Who wrote the novel Moby Dick?
    a) The Mississippi River
                                                        a) Charles Dickens
    b) The Charles River
                                                        b) Herman Melville
    c) The Nile River
                                                        c) Nathaniel Hawthorne
6) What is the smallest prime number?
                                                     16) What is another name for the average of a
   a) 1
b) 2
                                                    series?
    c) 5
                                                        b) Median
                                                        c) Mode
7) Which U.S. state has the highest per-capita
personal income?
                                                    17) Which U.S. state is known as "the Beaver
    a) Massachusetts
                                                    State?"
    b) Texas
                                                        a) Minnesota
    c) Connecticut
                                                        b) Oregon
                                                        c) Delaware
8) Which U.S. state has the lowest per-capital
personal income?
                                                    18) What is the name of Cain's brother in the

 a) Mississippi

    b) Delaware
                                                        a) Noah
    c) Nevada
                                                        b) Adam
                                                        c) Abel
9) Who discovered electricity?
    a) Alexander Graham Bell
                                                    19) When was the last time the Boston Red Sox
    b) Benjamin Franklin
                                                    won the World Series?
    c) Isaac Newton
                                                        b) 1918
10) How far can a kangaroo jump?
    a) 5 feet
    b) 15 feet
                                                    20) What does 3! equal?
    c) 30 feet
                                                        a) 333
```

```
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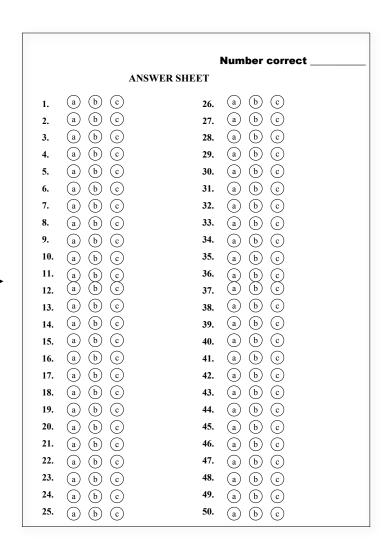
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                                                                    a) Minnesota
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    a) Mississippi
    b) Delaware

                                                               Bible?
                                                                   a) Noah
b) Adam
    c) Nevada

    a) Alexander Graham Bell
    b) Benjamin Franklin

                                                               19) When was the last time the Boston Red Sox won the World Series?
     c) Isaac Newton
                                                                   a) 1903b) 1918
10) How far can a kangaroo jump?
                                                                   c) 1998

    a) 5 feet
    b) 15 feet

                                                               20) What does 3! equal?
                                                                   a) 333
b) 6
                                                                   c) 9
```

```
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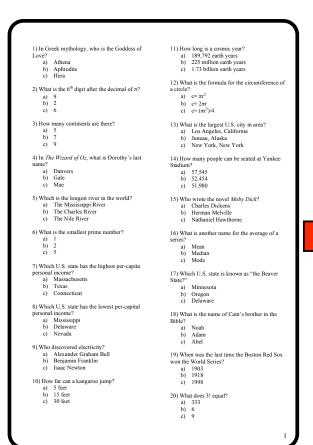
    a) Alexander Graham Bell
    b) Benjamin Franklin

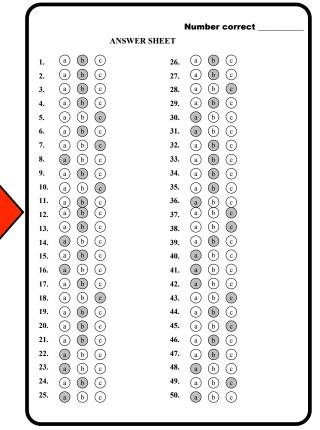
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                                                               a) 1903
b) 1918
10) How far can a kangaroo jump?
                                                                c) 1998
                                                           20) What does 3! equal?

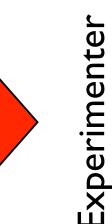
 b) 15 feet

                                                               a) 333
b) 6
                                                               c) 9
```

Number correct ANSWER SHEET (a) (b) (c) a b c (a) (b) (c) (a) 31. (a) (b) (c) (a) 00 (a) (b) **b** 0 a a (b) (a) (b) (c) 17. (a) (b) (c) (a) (b) (c) 42. (a) (b) (c) (a) (b) (c) (a) (b) (c) (a) (b) (c) 44. (a) (b) (c) (a) (b) (c) 21. (a) (b) (c) 46. (a) (b) (c) 22. (a) (b) (c) 47. (a) (b) (c) 23. (a) (b) (c) (a) (b) (c) 49. 24. (a) (b) (c) (a) (b) (c) (a) (b) (c) (a) (b) (c)







```
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    b) Aphrodite
c) Hera
                                                                    c) 1.73 billion earth years
                                                               12) What is the formula for the circumference of a circle?
2) What is the 6^{th} digit after the decimal of \pi?

 a) c= πr<sup>2</sup>

                                                                    b) c= 2πr
                                                                   c) c = (\pi r^3)/4
3) How many continents are there?
                                                               13) What is the largest U.S. city in area?

    a) Los Angeles, California
    b) Juneau, Alaska

                                                                    c) New York, New York
4) In The Wizard of Oz, what is Dorothy's last
                                                               14) How many people can be seated at Yankee
    a) Danvers
                                                                   a) 57,545
b) 52,454
    b) Gale
c) Mae
                                                                    c) 51,980
5) Which is the longest river in the world?
                                                               15) Who wrote the novel Moby Dick?

    a) The Mississippi River
    b) The Charles River

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6) What is the smallest prime number?
                                                               16) What is another name for the average of a
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                                                                   a) Mean
b) Median
                                                                   c) Mode
7) Which U.S. state has the highest per-capita
personal income?

a) Massachusetts
                                                               17) Which U.S. state is known as "the Beaver
    b) Tevas
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                                                                   a) Noah
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                                                               19) When was the last time the Boston Red Sox won the World Series?
     c) Isaac Newton
                                                                   a) 1903b) 1918
10) How far can a kangaroo jump?
                                                                   c) 1998

    a) 5 feet
    b) 15 feet

                                                               20) What does 3! equal?
                                                                   a) 333
b) 6
                                                                   c) 9
```

```
1) In Greek mythology, who is the Goddess of
                                                           11) How long is a cosmic year?

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    b) 225 million earth years

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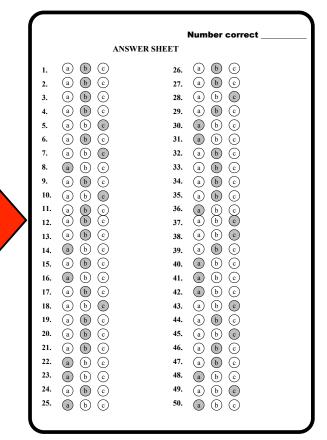
                                                           Bible?
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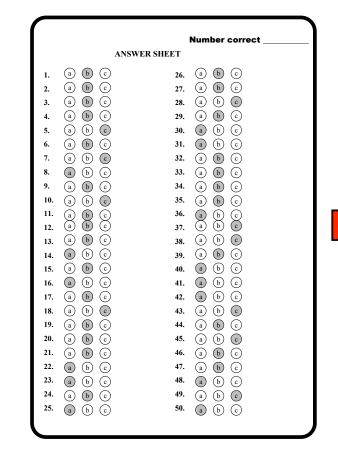
                                                               a) 333
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                                                               c) 9
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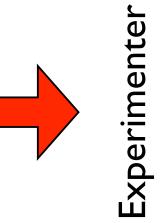




Number correct ANSWER SHEET (a) (b) (c) (a) (b) (c) a b c a b c (a) (b) (c) (a) (b) (c) a b c a b c a b c 41. (a) (b) (c) abc 42. a b c a b c a b c a b c (a) (b) (c) 47. a b c 48. a b c 24. (a) (b) (c) 49. (a) (b) (c) 25. (a) (b) (c) 50. (a) (b) (c)







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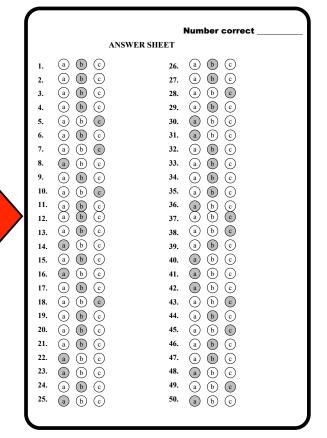
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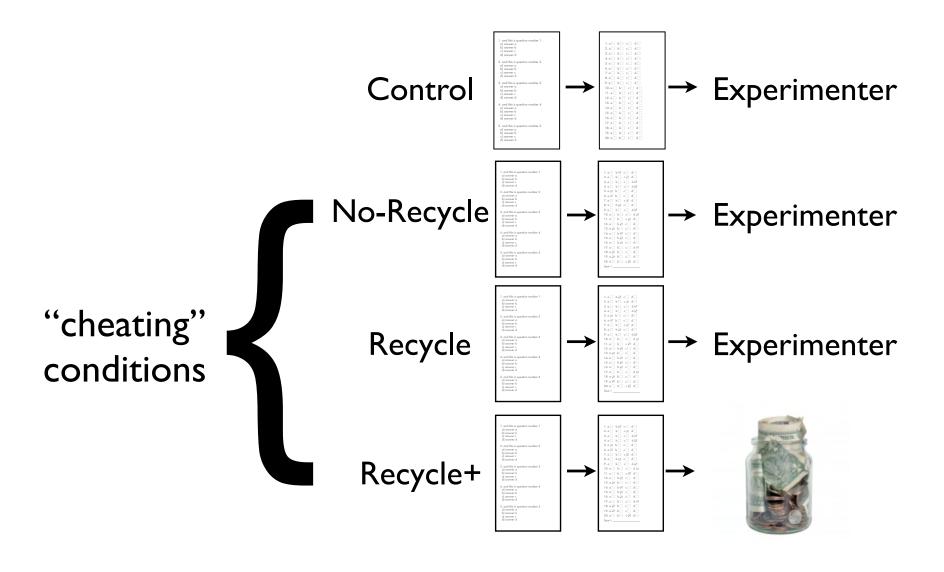




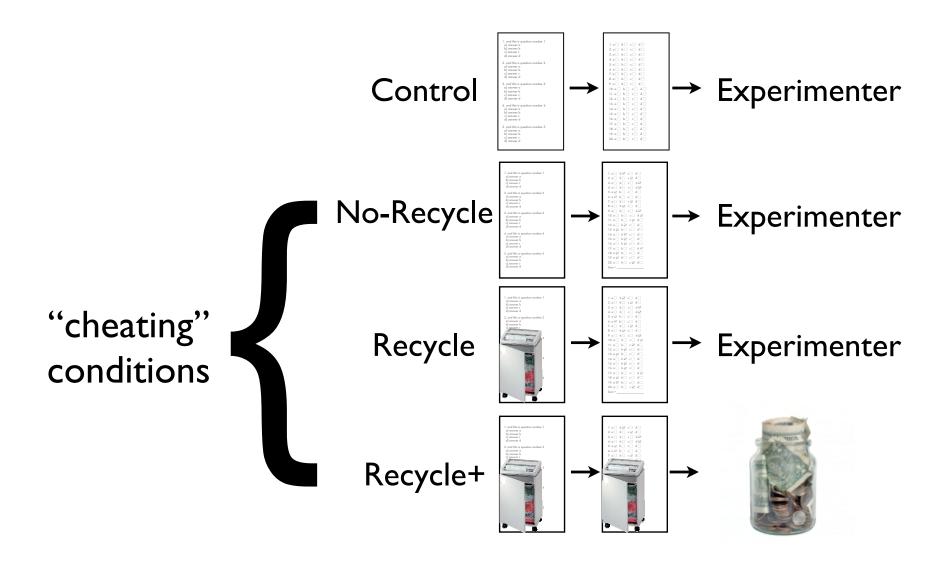




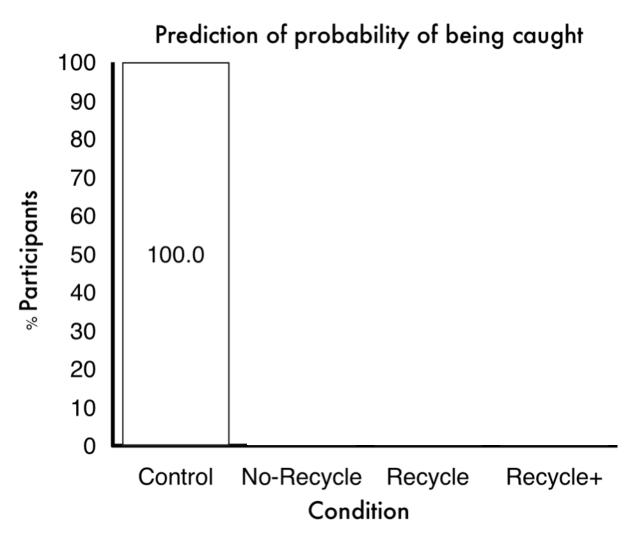
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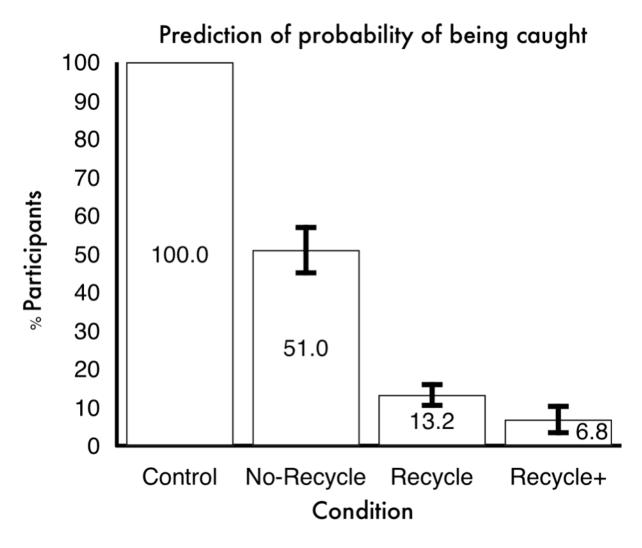
4 Conditions



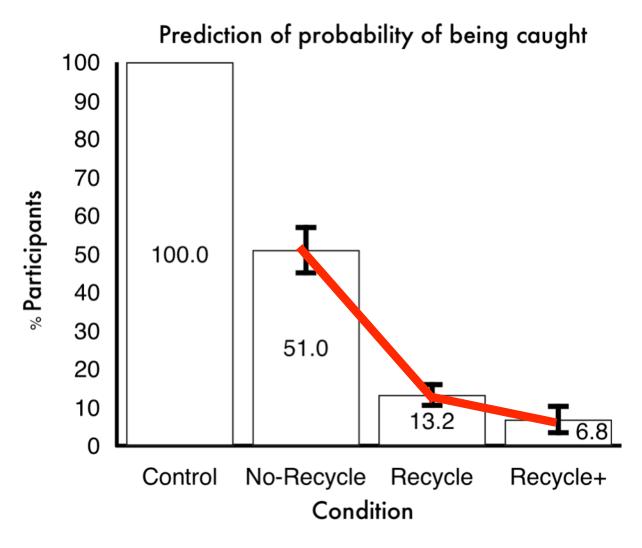
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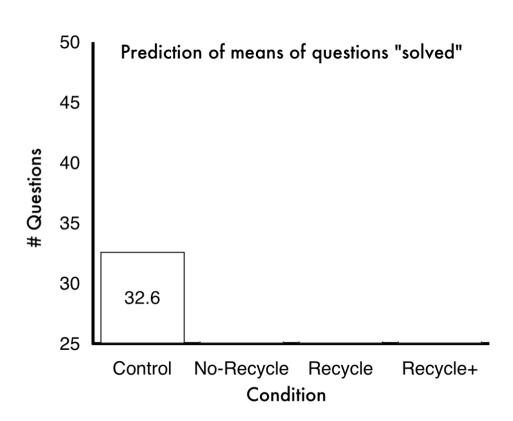


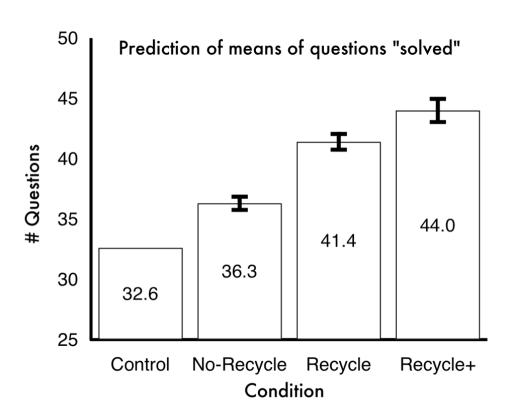
External Rewards Probabilities of getting caught

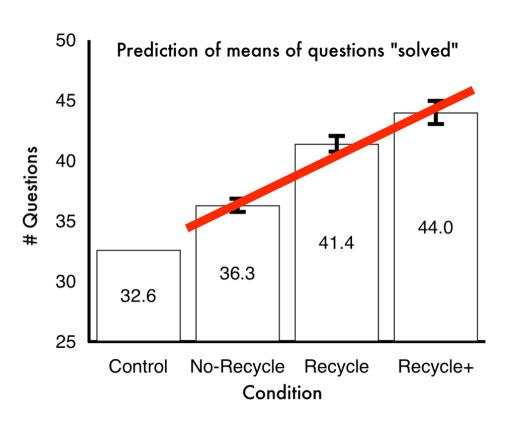


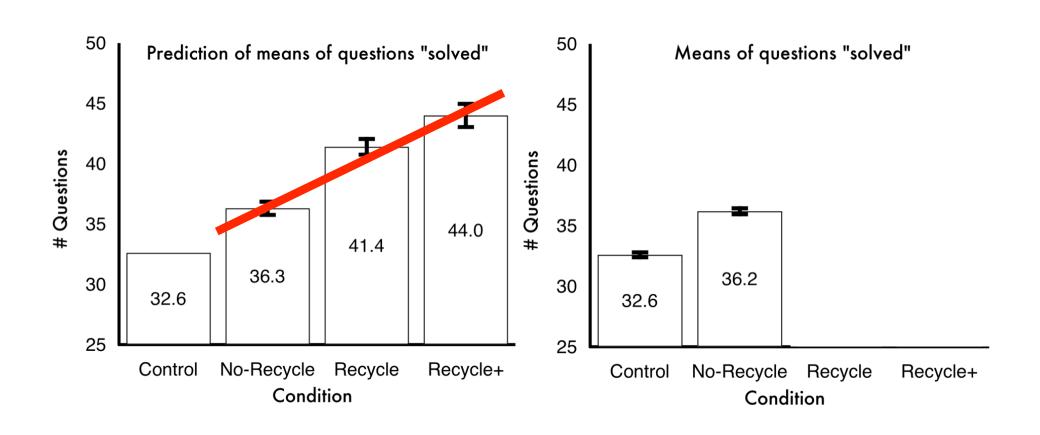
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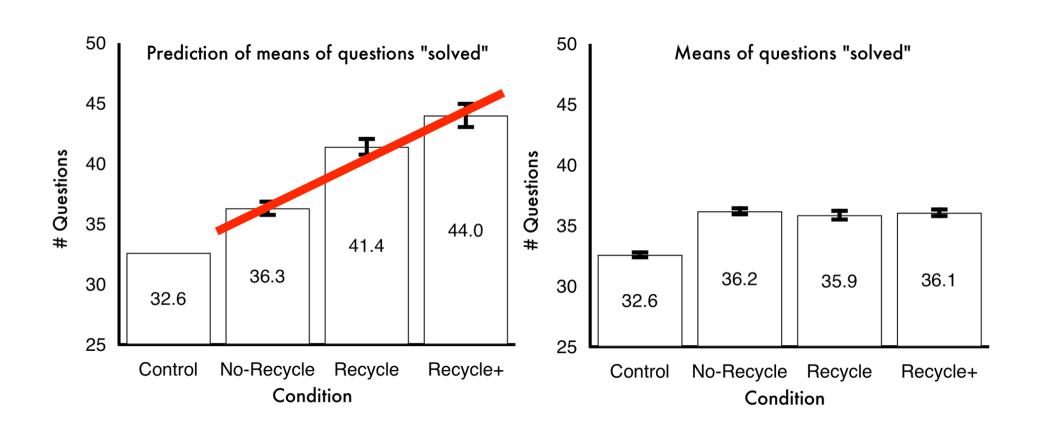


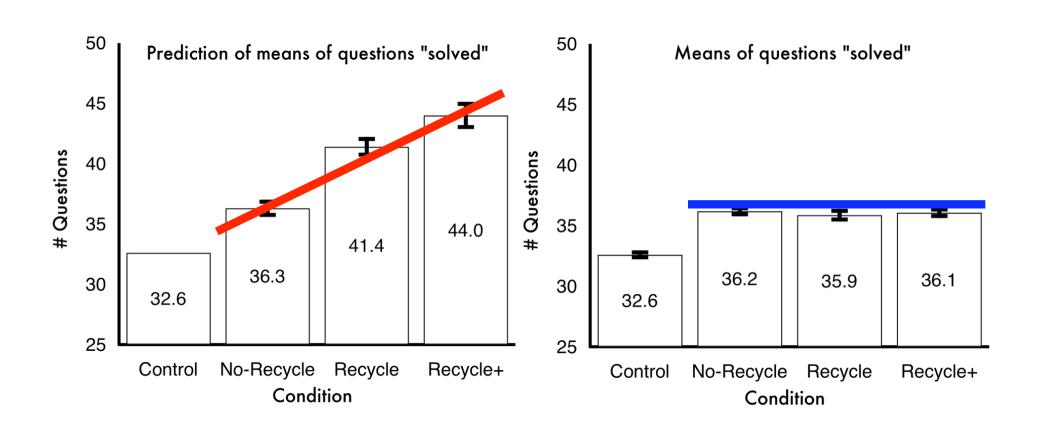


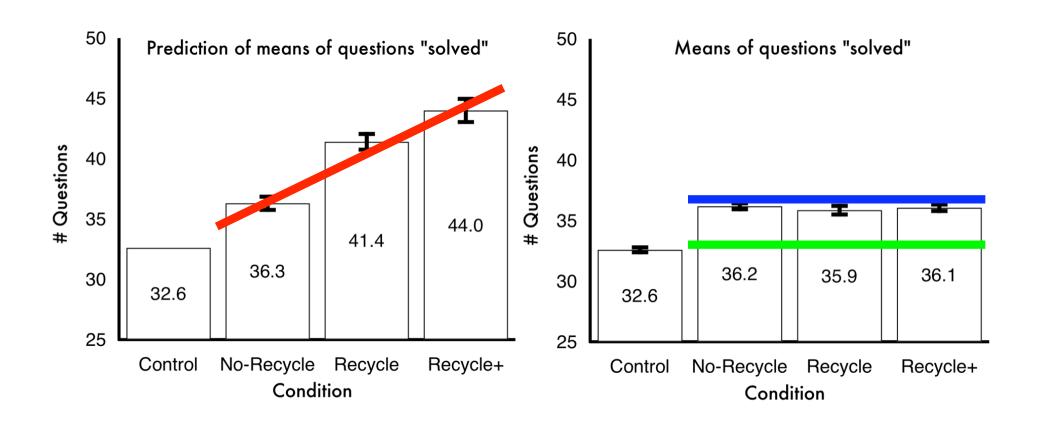


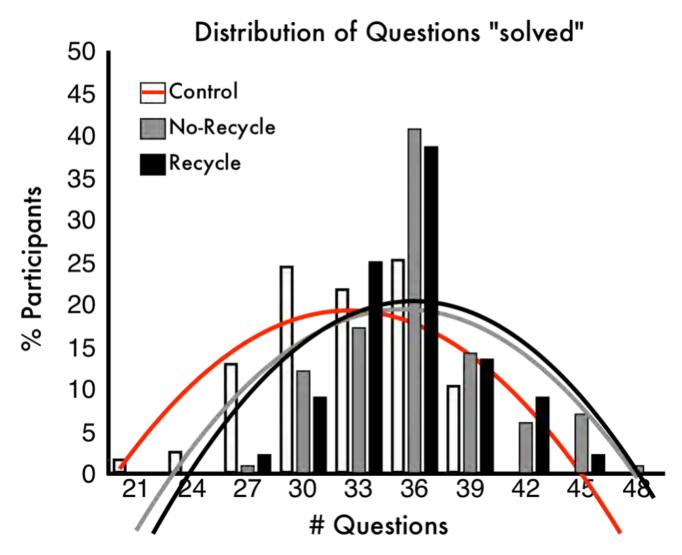












Awareness I

Would reminding people of the 10 Commandments influence deception?

Example In each of the 20 boxes below, find a set of numbers that sum up exactly to 10. For each box, in which 3.91 0.82 3.75 you found the set, circle the numbers and mark the 1.11 1.69 7.94 corresponding 'Got It' box below. See Example ──► 3.28 <u>2.52</u> 6.25 For each box you get, you will receive \$0.50. 9.81 6.09 2.46 You have 5 minutes. Got it ☑ On average people solve 4 boxes correctly. When finished: 1. Fill out the attached collection slip. 2. Submit both pages to the experimenter, who will check your answers. 1.69 1.82 2.91 0.46 0.53 1.88 0.49 0.74 1.17 0.47 4.58 2.57 6.13 5.11 3.42 3.72 2 1.22 3.15 3.82 4.38 4.67 4.81 3.05 5.82 5.06 4.28 7.05 5.43 4.15 3.75 5.22 5.67 4.94 5.42 5.98 6.36 5.19 4.57 7.15 5.76 4.77 8.83 8.23 7.7 2.95 4.86 7.54 Got it Got it Got it Got it 0.13 0.24 0.41 0.81 1.31 2.09 0.17 2.46 2.44 0.46 1.98 2.38 2.81 1.86 1.2 4.55 3.75 3.19 6.02 5.6 2.63 0.48 1.79 2.48 5.62 9.41 6.81 0.58 1.69 2.59 3.33 3.46 4.07 6.05 6.21 6.6 5.67 5.46 5.18 7.02 8.48 8.51 8.22 8.19 7.54 1.65 0.98 2.94 Got it Got it Got it 0.06 5.07 5.39 0.85 | 1.62 | 1.63 0.15 | 0.95 | 1.31 0.63 0.65 1.02 1.71 0.03 8.98 6.06 5.63 1.69 4.98 2.9 2.88 2.64 2.34 2.12 6.25 5.01 1.78 6.66 6.73 7.67 2.89 5.98 8.89 2.1 4.96 9.42 4.53 4.65 9.92 6.36 3.16 1.91 9.75 9.85 8.17 9.49 9.37 9.33 0.14 0.15 0.32 0.84 1.54 7.28 0.77 1.47 1.69 0.63 0.74 2.23 4.42 3.54 7.18 8.05 7.68 3.71 5.51 5.68 0.52 3.38 3.18 2.28 5.48 6.15 0.84 5.54 4.78 5.55 3.62 3.01 2.48 8.31 7.06 4.51 5.28 3.31 1.17 6.99 6.93 6.76 3.68 2.93 2.53 8.45 6.44 5.29 0.12 0.71 0.74 0.74 1.93 2.76 0 14 0.67 2.22 7.24 5.03 3.14 5.96 5.58 5.22 4.27 3.07 2.27 1.05 2.39 2.96 5.09 5.73 5.82 7.71 6.38 3.8 7.04 7.59 9.33 1.44 2.28 3 9.27 7.03 6.79 8.28 9.18 9.48 9.77 9.5 8.52 1.73 2.19 3.85 Got it Got it

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On average people solve 4 boxes correctly.

| Sample | 3.91 | 0.82 | 3.75 | 1.11 | 1.69 | 7.94 | 3.28 | 2.52 | 6.25 | 9.81 \(6.09 \) 2.46 | Got it

When finished:

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1.69	1.82	2.91
4.67	4.81	3.05
5.82	5.06	4.28
6.36	5.19	4.57

got it □

1.69 1.82 2.91	0.46 0.53 1.88 6.13 5.11 3.42 7.05 5.43 4.15 7.15 5.76 4.77 Got it □	0.49 0.74 1.17	0.47 4.58 2.57
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5.82 5.06 4.28		3.75 5.22 5.67	4.94 5.42 5.98
6.36 5.19 4.57		8.83 8.23 7.7	2.95 4.86 7.54
Got it		Got it □	Got it □
0.13 0.24 0.41	0.81 1.31 2.09	0.17 2.46 2.44	0.46 1.98 2.38 0.48 1.79 2.48 0.58 1.69 2.59 1.65 0.98 2.94 Got it
2.81 1.86 1.2	4.55 3.75 3.19	6.02 5.6 2.63	
3.33 3.46 4.07	5.62 9.41 6.81	6.05 6.21 6.6	
5.67 5.46 5.18	7.02 8.48 8.51	8.22 8.19 7.54	
Got it □	Go† if □	Got it	
0.06 5.07 5.39	0.85 1.62 1.63	0.15 0.95 1.31	0.63 0.65 1.02 2.64 2.34 2.12 2.89 5.98 8.89 9.49 9.37 9.33 Got it □
1.71 0.03 8.98	6.06 5.63 1.69	4.98 2.9 2.88	
2.1 4.96 9.42	6.25 5.01 1.78	6.66 6.73 7.67	
4.53 4.65 9.92	6.36 3.16 1.91	9.75 9.85 8.17	
Got it □	Got it □	Got it □	
0.14 0.15 0.32	0.84 1.54 7.28	0.77 1.47 1.69	0.63 0.74 2.23
5.51 5.68 0.52	4.42 3.54 7.18	3.38 3.18 2.28	8.05 7.68 3.71
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5.28 3.31 1.17	6.99 6.93 6.76	3.68 2.93 2.53	8.45 6.44 5.29
Got it □	Got it □	Got it □	Gof if □
0.12 0.71 0.74	0.74 1.93 2.76	0 14 0.67 2.22	0.2 2.54 2.8
4.27 3.07 2.27	7.24 5.03 3.14	5.96 5.58 5.22	1.05 2.39 2.96
5.09 5.73 5.82	7.71 6.38 3.8	7.04 7.59 9.33	1.44 2.28 3
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Got it □	Go1 if □	Go1 it □	Got it □

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| Sample | Sample | Sample | | S

When finished:

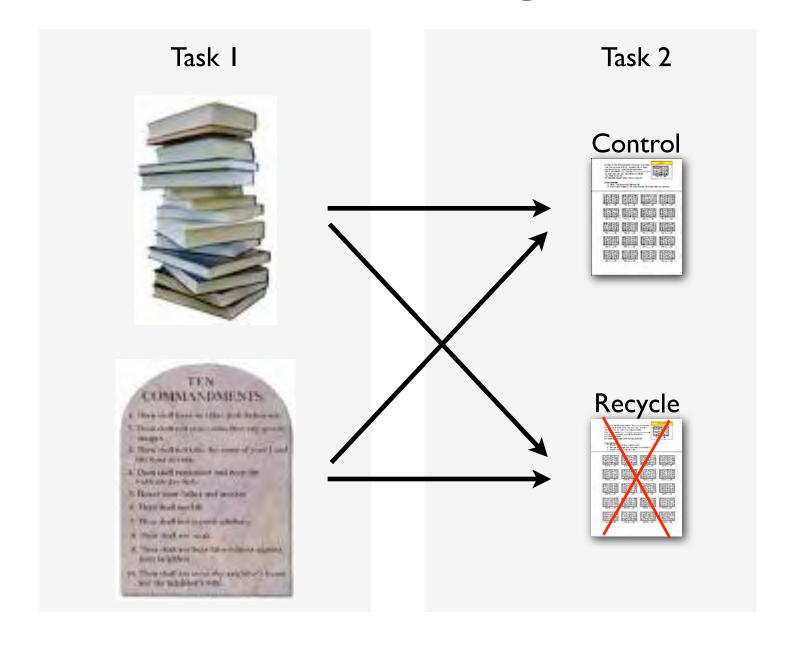
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got it 🚺

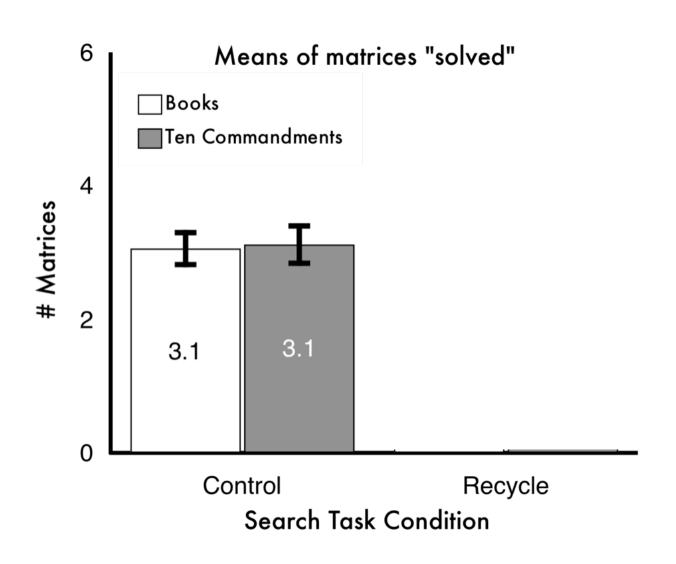
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Got it	Got it □	Got it □	Got it □
0.13 0.24 0.41	0.81 1.31 2.09	0.17 2.46 2.44	0.46 1.98 2.38
2.81 1.86 1.2	4.55 3.75 3.19	6.02 5.6 2.63	0.48 1.79 2.48
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5.67 5.46 5.18	7.02 8.48 8.51	8.22 8.19 7.54	1.65 0.98 2.94
Got it 🗆	Got it	Got it 🗆	Got it
0.06 5.07 5.39	0.85 1.62 1.63	0.15 0.95 1.31	0.63 0.65 1.02
1.71 0.03 8.98	6.06 5.63 1.69	4.98 2.9 2.88	2.64 2.34 2.12
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4.53 4.65 9.92	6.36 3.16 1.91	9.75 9.85 8.17	9.49 9.37 9.33
Got it 🗆	Got it 🗆	Got it 🗆	Got it
0.14 0.15 0.32	0.84 1.54 7.28	0.77 1.47 1.69	0.63 0.74 2.23
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Got it 🗆	Got it	Got it 🗆	Got it
0.12 0.71 0.74	0.74 1.93 2.76	0 14 0.67 2.22	0.2 2.54 2.8
4.27 3.07 2.27	7.24 5.03 3.14	5.96 5.58 5.22	1.05 2.39 2.96
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9.27 7.03 6.79	8.28 9.18 9.48	9.77 9.5 8.52	1.73 2.19 3.85
Got it 🗆	Got it □	Got it □	Got it □

2 x 2 Design

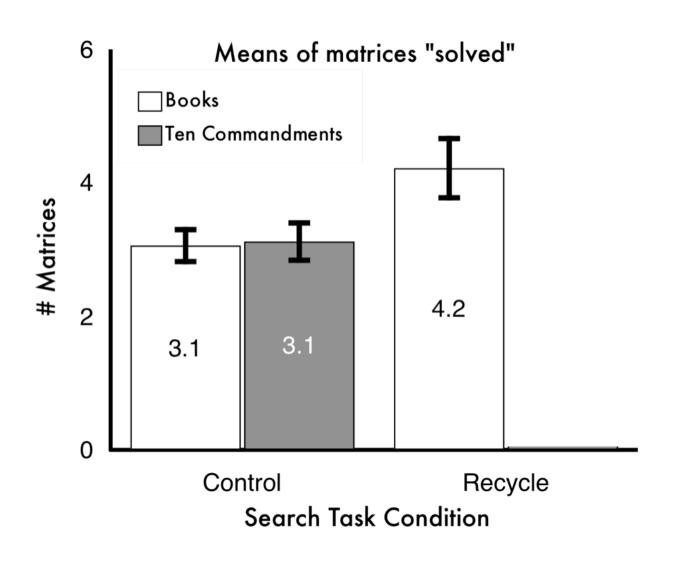


Ten Commandments Results

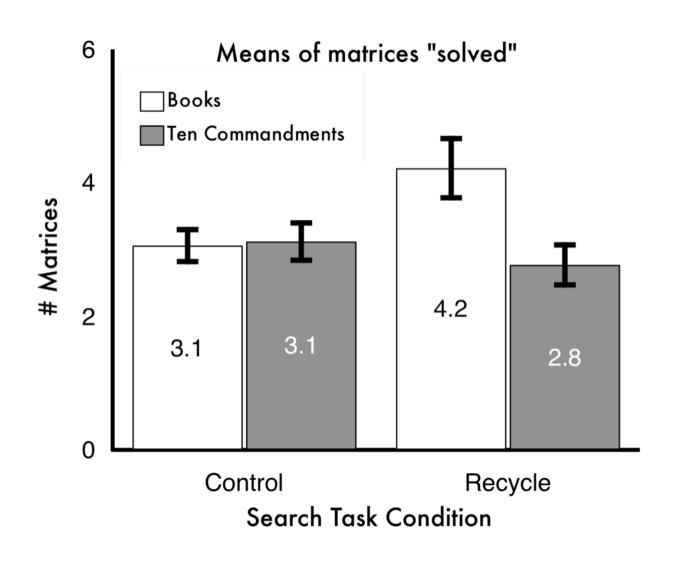
Ten Commandments Results



Ten Commandments Results



Ten Commandments Results



"Degrees of Freedom"

Would using a medium such as tokens influence deception?



















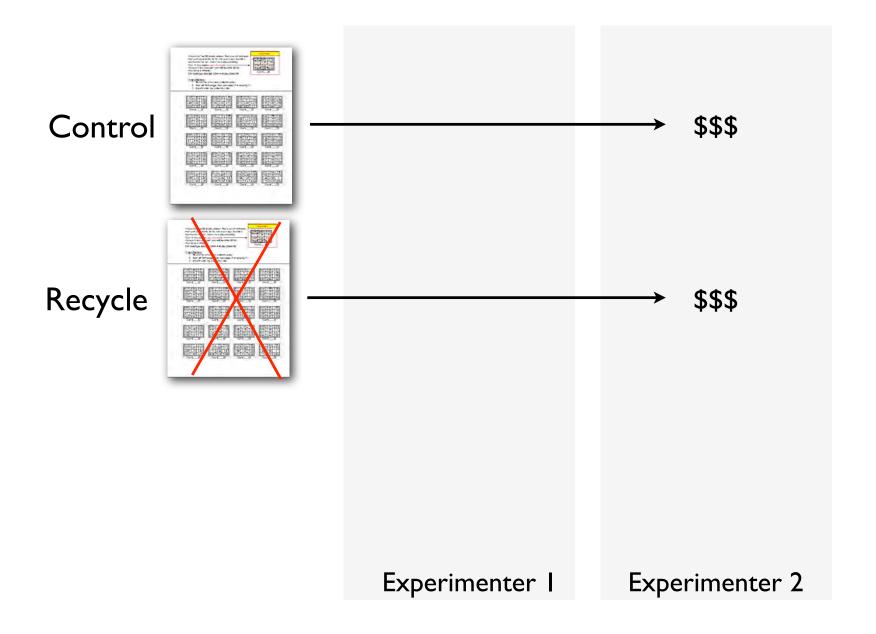




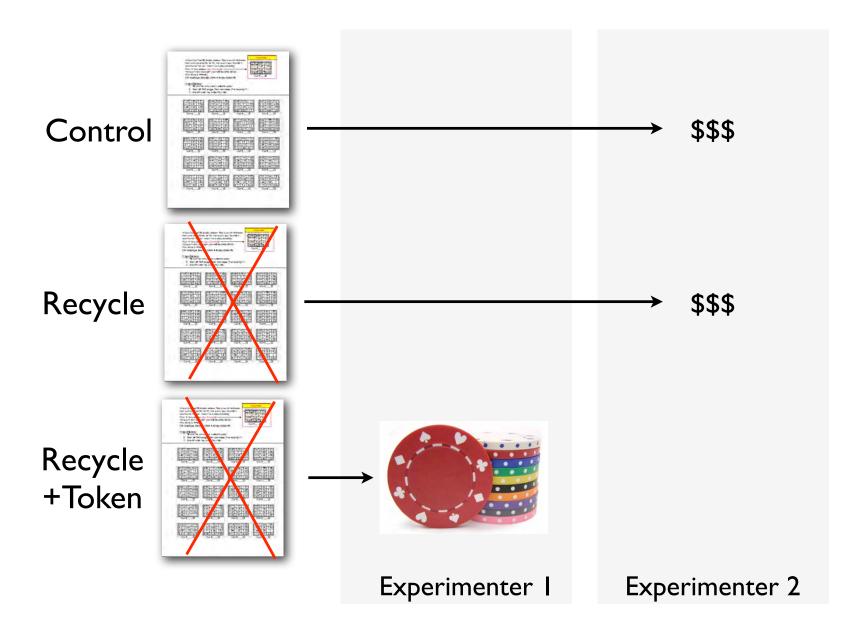




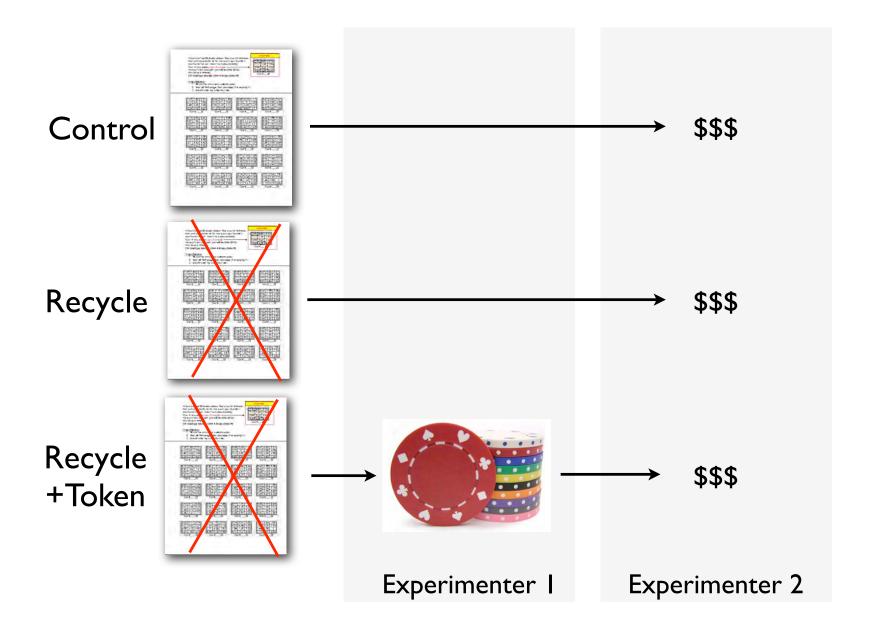
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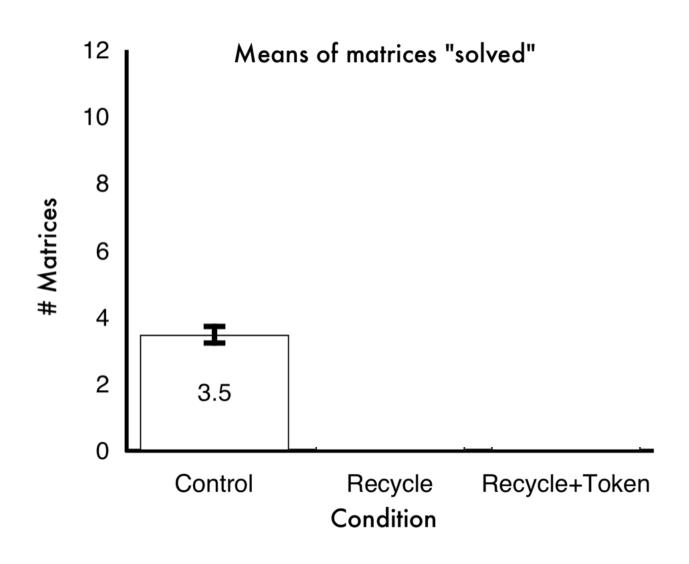


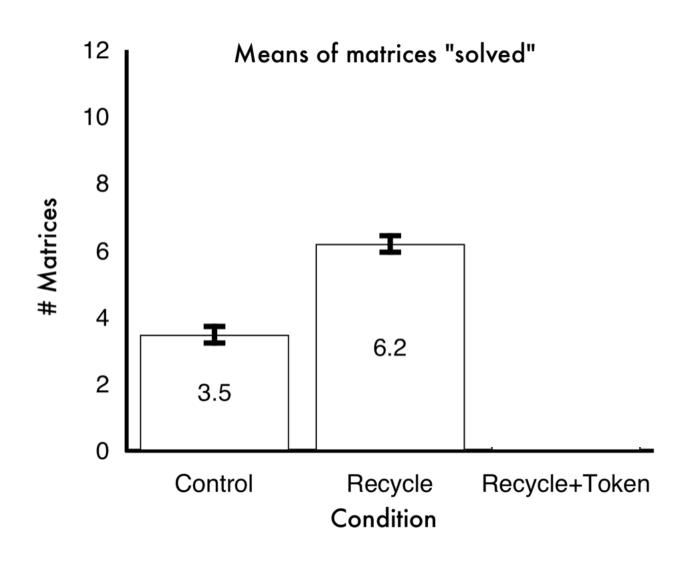
3 Conditions

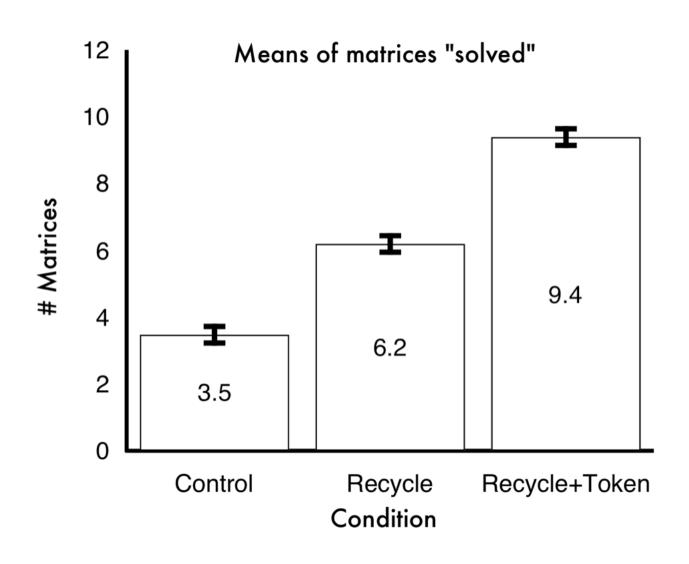


3 Conditions









(Dis)honesty conclusions

- Policy is largely based on the standard cost benefit model
- In our experiments people do not care much about external rewards
- A lot of people cheat a bit
- Awareness matters
- Medium (tokens) matters
- A "self image" model

Summary:

Fuzzy preferences
Environment
Unplanned inferences
Focalism
Emotions

Understanding ourselves is the first step for free lunches

THANKS

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- Introduction: How did I start?
- Ch I: The Truth about Relativity
- Ch 2: The Fallacy of Supply & Demand
- Ch 3: The Cost of Zero Cost
- Ch 4: The Cost of Social Norms
- Ch 5: The Influence of Arousal
- Ch 6: The Problem of
- Ch 7: The High Price of Ownership
- Ch 8: Keeping Doors Open
- Ch 9: The Effect of Expectations
- Ch 10: The Power of Price
- Ch II & I2: The Context of Our Character
- Ch 13:Free Lunches

