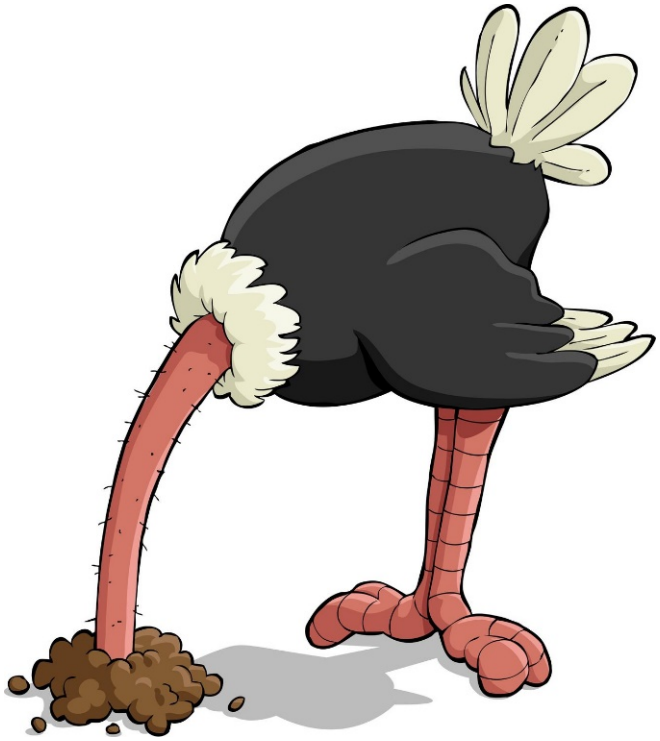
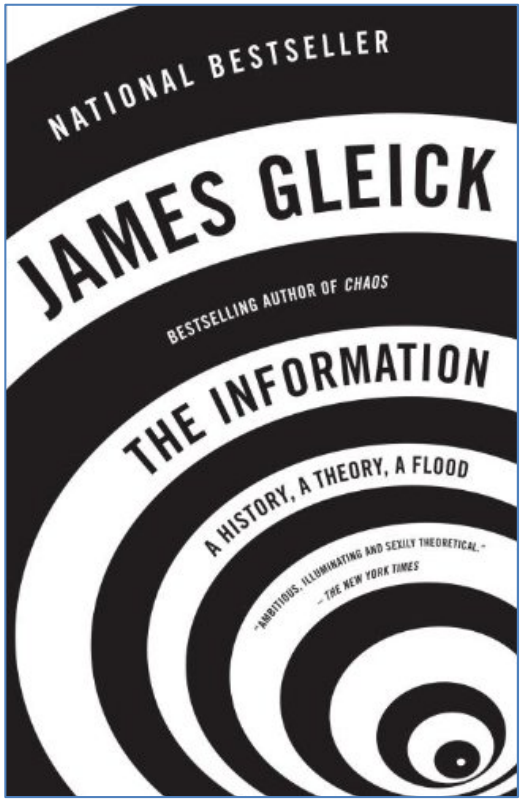
Information Avoidance



Economics of Information

- Stigler, 1961; The Economics of Information. *JPE 69* (3), 213-225.
  - Information is a scarce commodity, like any other, that can be bought and sold
  - Information valued to the extent that it aids in decision making, and only to that extent

  → (valid) information will never be actively avoided; at worst it will be ignored
- 1970s: "new economics of information" (asymmetric information)
  - adverse selection (George Akerlof)
  - signaling (Michael Spence)
  - screening (Joseph Stiglitz)
- Often said that we are in the "age of information"
- Is it time for a new new economics of information?



Belief-based utility ("new new economics of information")

- Schelling (1987): "the mind as a consuming organ"
- Abelson (1986) "Beliefs are like possessions"
- Loewenstein, George. 1987. "Anticipation and the Valuation of Delayed Consumption." *Economic Journal*, 97(387): 666–684.
- Geanakoplos, John, David Pearce, and Ennio Stacchetti. 1989. "Psychological games and sequential rationality." *Games and Economic Behavior*, 1(1): 60–79.
- Caplin, Andrew, and John Leahy. 2001. "Psychological Expected Utility Theory and Anticipatory Feelings." *QJE*, 116(1): 55–79.
- Kőszegi (2010). "Utility from anticipation and personal equilibrium" *Economic Theory*. 44(3):415-444
- Benabou & Tirole (e.g., 2010) "Identity, Morals and Taboos: Beliefs as Assets." *QJE* 126(2): 805–55.

Some of this work summarized in:

Loewenstein, G. (2006). The pleasures and pains of information. *Science, 312*, 704-706.

- Lots of information-related phenomena don't fit with economic models
- Many of these are key to recent developments in, e.g., social networking, e-commerce, etc.

	Desire *to*	Desire *not to*
Obtain information		
Share information		

Curiosity

Loewenstein (1994). The psychology of curiosity: A review and reinterpretation. *Psychological Bulletin*, 116, 75-98.

- Account of curiosity based on concept of an *information gap*
- Enumeration of some of curiosity's most salient features..
  - Intensity
  - Stimulus-dependence/transience
  - Disappointment when satisfied

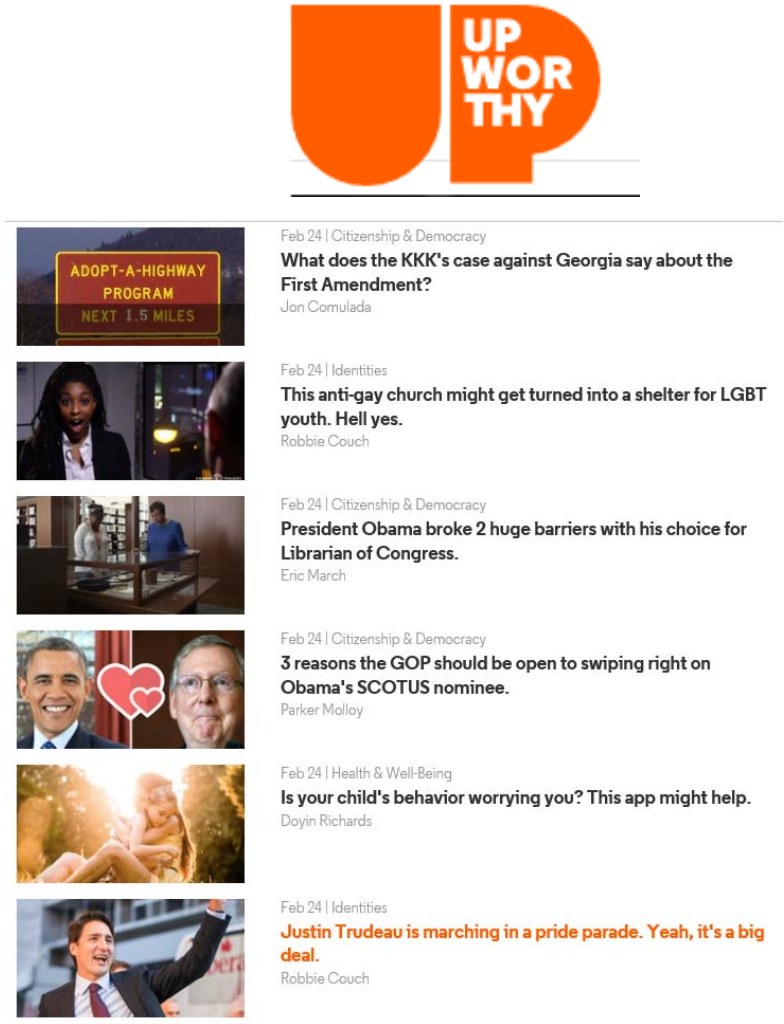
Golman & Loewenstein (2012), Curiosity, Information Gaps, and the Utility of Knowledge. SSRN

  - Formal model of information gaps

Chater & Loewenstein, G. (2016). The Under-appreciated Drive for Sense-making. *Journal of Economic Behavior and Organization*.

Kruger & Evans (2009). "The paradox of Alypius and the pursuit of unwanted information." *JESP*, 45(6), 1173-1179.

Hsee & Ruan (2015). Curiosity Kills the Cat. in *Advances in Consumer Research.* 43, 62-67.



	Desire *to*	Desire *not to*
Obtain information	Curiosity	
Share information		Privacy 

Privacy

Acquisti, John & Loewenstein. 2012. "The Impact of Relative Standards on the Propensity to Disclose," *JMR*.

Showing that people take their cues about what to reveal from others and from their past experiences

Brandimarte, Acquisti & Loewenstein. 2013. Misplaced confidences: Privacy and the control paradox. *SPPS*.

Showing that giving people more control over privacy may be giving them more rope to hang themselves with

Acquisti, John & Loewenstein. 2013. What is Privacy Worth? *Journal of Legal Studies*.

Showing that people exhibit default effects and loss aversion with respect to privacy

Acquisti, Brandimarte & Loewenstein (2015). Privacy and human behavior in the age of information. *Science*.

John, Acquisti & Loewenstein. 2011. Strangers on a Plane: Context-Dependent Willingness to Divulge Sensitive Information. *Journal of Consumer Research.*

The New York Times

PERSONAL TECH

The Apple Case Will Grope Its Way Into Your Future

Farhad Manjoo
STATE OF THE ART FEB. 24, 2016

Stuart Goldenberg

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To understand what's at stake in the battle between Apple and the F.B.I. over cracking open a terrorist's smartphone, it helps to be able to predict the future of the tech industry.

For that, here's one bet you'll never lose money on: Digital technology always grows hungrier for more personal information, and we users nearly always accede to its demands. Today's smartphones hold a lot of personal data — your correspondence, your photos, your location, your dignity. But tomorrow's devices, many of which are already around in rudimentary forms, will hold a lot more.

representative study from the BE & privacy line of research..

- CMU students (n=200) asked if they have engaged in a series of sensitive and/or illegal behaviors
- Most provided CMU email addresses from which it would have been trivial to determine their identity

1. Have you ever made up a serious excuse, such as grave illness or death in the family, to get out of doing something?
2. Have you ever looked at pornographic material?
3. Have you ever used sex toys?*
4. Have you ever smoked marijuana (i.e., pot, weed)?
5. Have you ever "cheated" while in a relationship?
6. Have you ever driven when you were pretty sure you were over the legal blood alcohol level?
7. Have you ever taken nude pictures of yourself or a partner?*
8. Have you ever encouraged someone to drink when you were trying to seduce them?
9. Have you ever tried to peek at someone else's (e.g., a classmate's, boyfriend's, girlfriend's) e-mail account without them knowing?**
10. Have you ever fantasized about having violent nonconsensual sex?
11. Have you ever tried cocaine?
12. Have you ever had sexual thoughts about a member of your same sex?**
13. Have you ever sold marijuana (i.e., pot, weed) to someone?
14. Have you ever watched someone while they undressed, without their knowledge?*
15. Have you ever had anal sex?

John, L., Acquisti, A., & Loewenstein, G. (2011). "Strangers on a Plane: Context-Dependent Willingness to Divulge Sensitive Information." *Journal of Consumer Research*, *37*(5), 858-873.

Professional Interface

(accompanied by elaborate assurances of confidentiality and anonymity)

Unprofessional Interface

How BAD Are U???

44%

4. Have you ever smoked marijuana (i.e. pot, weed)?

- Yes
- No

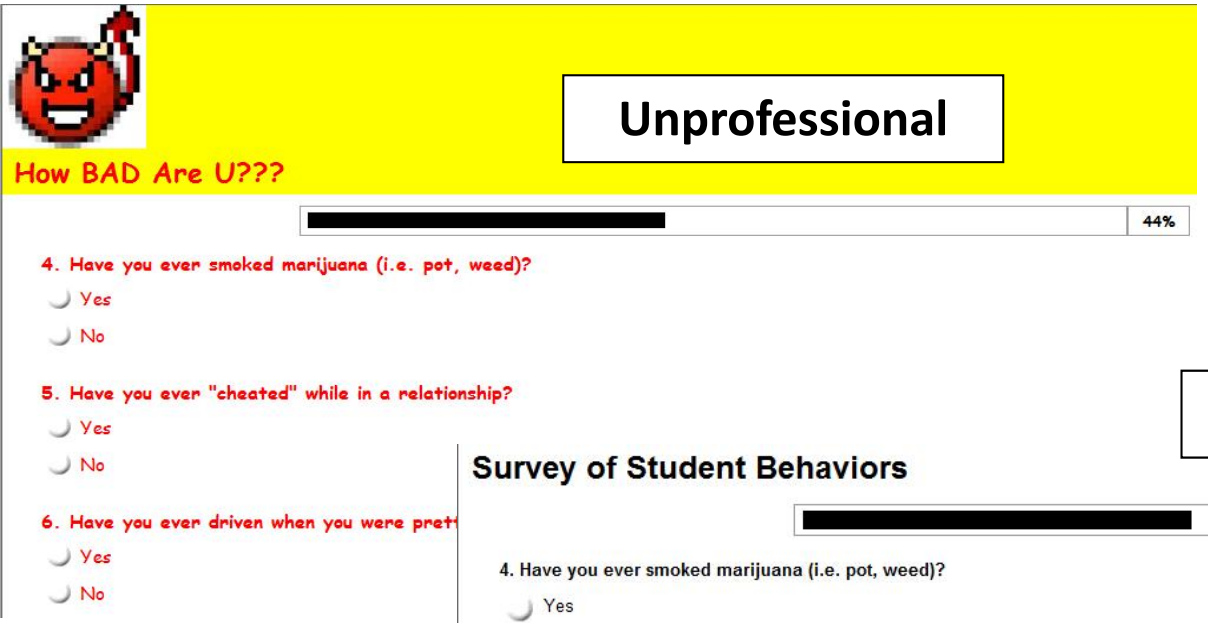
5. Have you ever "cheated" while in a relationship?

- Yes
- No

6. Have you ever driven when you were pretty sure you were over the legal blood alcohol level?

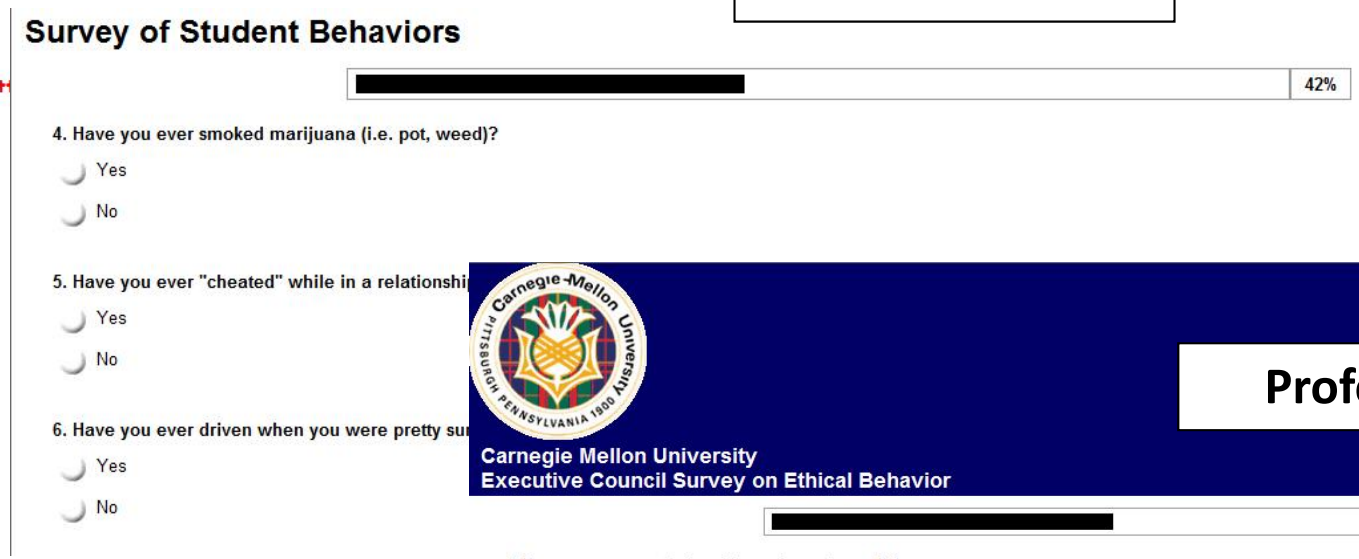
- Yes
- No

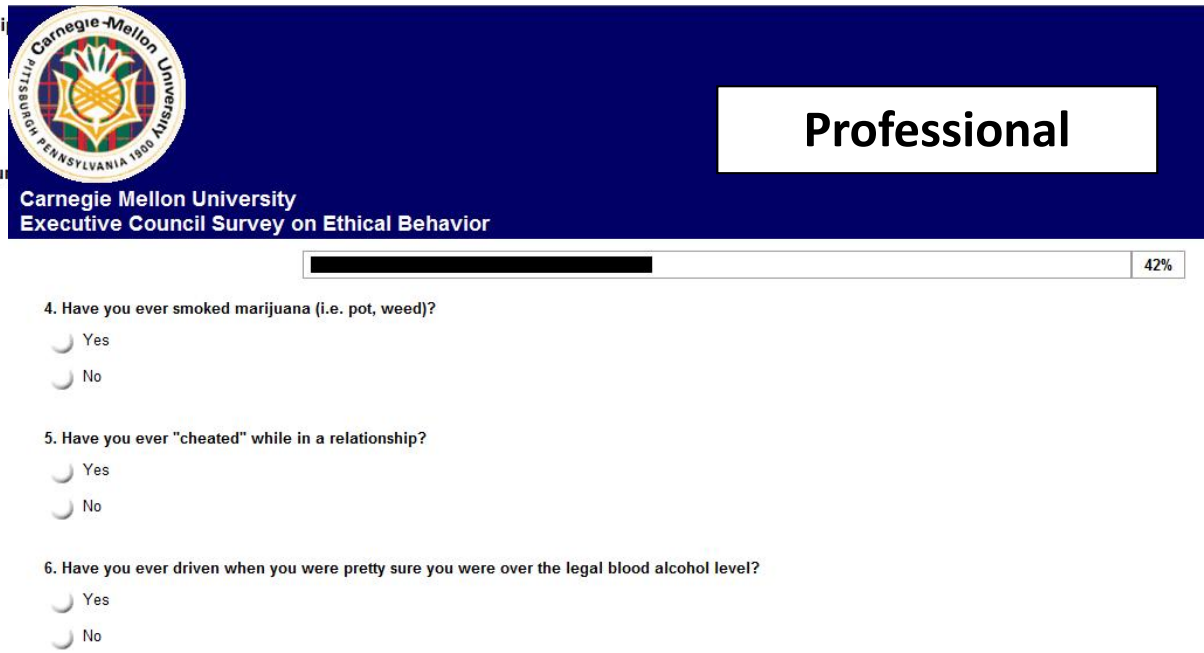
and neutral interface..



Unprofessional

Baseline





Professional

Hypothesis: Professional website, and privacy assurances backfire..

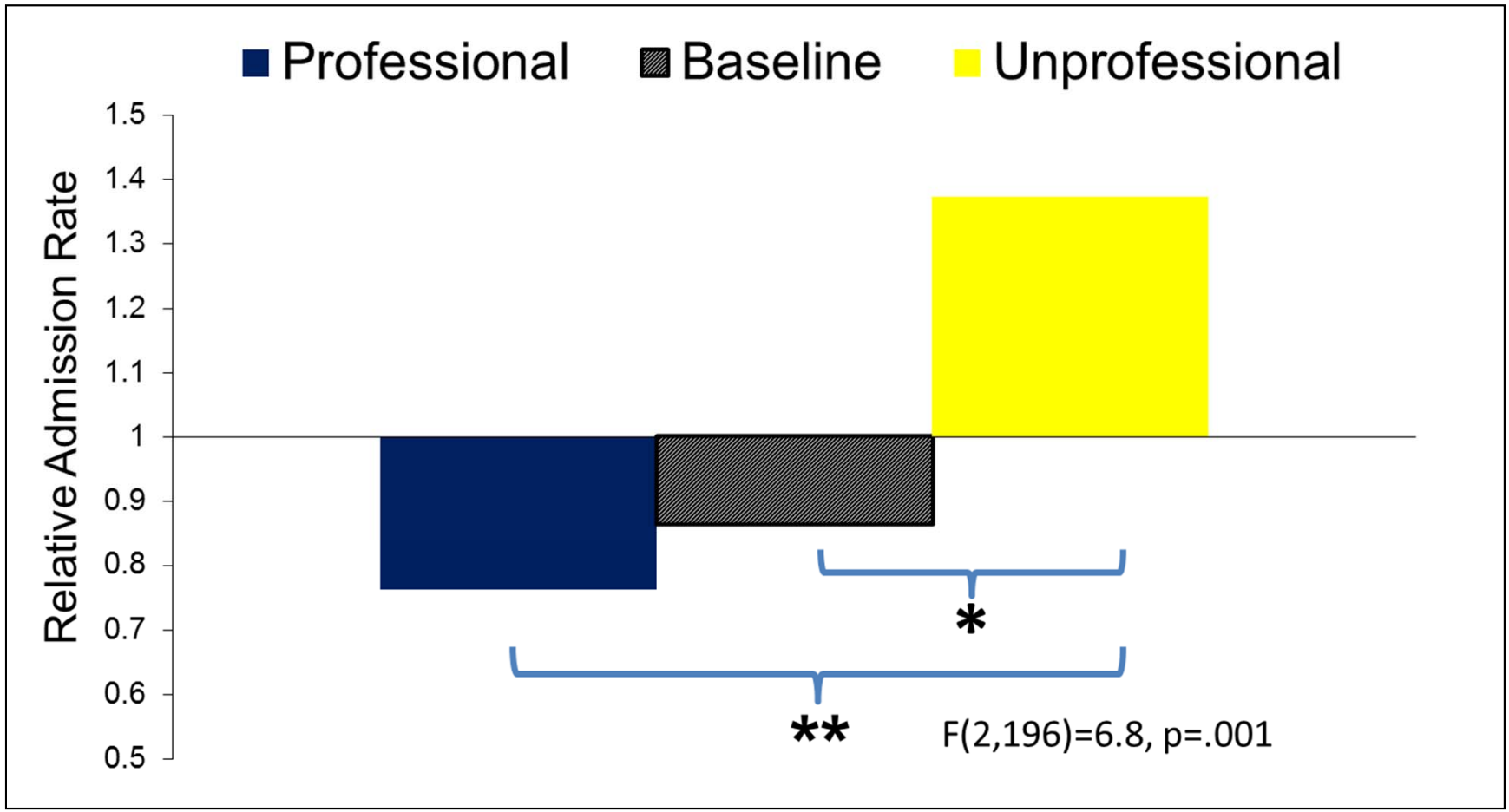
- remind people that privacy is an issue
- implicitly signal disapproval of the behaviors

EXPERIMENT 2: AFFIRMATIVE ADMISSION RATES BY QUESTION AND CONDITION (LISTED IN ORDER OF PRESENTATION)

Item	Affirmative admission rate (%)		
	Professional	Baseline	Unprofessional
1. Have you ever made up a serious excuse, such as grave illness or death in the family, to get out of doing something?	26.2	39.1	35.2
2. Have you ever looked at pornographic material?	67.7	76.6	81.7
3. Have you ever used sex toys?*	6.2	12.5	21.1
4. Have you ever smoked marijuana (i.e., pot, weed)?	26.2	26.6	35.2
5. Have you ever "cheated" while in a relationship?	18.5	21.9	31.0
6. Have you ever driven when you were pretty sure you were over the legal blood alcohol level?	16.9	17.2	29.6
7. Have you ever taken nude pictures of yourself or a partner?*	16.9	15.6	23.9
8. Have you ever encouraged someone to drink when you were trying to seduce them?	9.2	10.9	22.5
9. Have you ever tried to peek at someone else's (e.g., a classmate's, boyfriend's, girlfriend's) e-mail account without them knowing?**	29.2	26.6	45.1
10. Have you ever fantasized about having violent nonconsensual sex?	18.5	18.8	22.5
11. Have you ever tried cocaine?	3.1	1.6	7.0
12. Have you ever had sexual thoughts about a member of your same sex?**	16.9	14.1	31.0
13. Have you ever sold marijuana (i.e., pot, weed) to someone?	4.6	4.7	8.5
14. Have you ever watched someone while they undressed, without their knowledge?*	4.7	12.1	19.7
15. Have you ever had anal sex?	6.3	10.3	14.1

*Professional versus unprofessional $p < .05$ (two sided).
**Professional versus unprofessional $p < .05$ (two sided), and baseline versus unprofessional $p < .05$ (two sided).

Overall results..



Follow-up study found that, when viewed side-by-side, people overwhelmingly viewed the professional website as more secure, and safer to share information on.

Main conclusions from privacy research:

- Concern about privacy is extremely context-dependent
- People's willingness to share information varies in response to cues that have little connection to the true costs and benefits of sharing and withholding
- Overall, people don't care much about privacy (except when one 'rings alarm bells'

→ insight: Desire to reveal information is a far more powerful motive than the desire to conceal it

	Desire *to*	Desire *not to*
Obtain information	Curiosity	
Share information	Desire to reveal 	Privacy

Desire to reveal

Robin Chipman Dolan commented on Kathy Robinson Johnson's post.

See Style Options

Hamilton Beach 22811 Keep Warm 2-Slice Toaster
by Hamilton Beach

$41.99 ~~$92.46~~ Prime
Get it by **Tomorrow, Feb 26**

More Buying Choices
$21.95 new (35 offers)
$24.24 used (9 offers)

FREE Shipping on eligible orders

4.4 ▾ 738

Customer Reviews

4.0 out of 5 stars ▾ 739

5 star	55%
4 star	18%
3 star	8%
2 star	7%
1 star	12%

Share your thoughts with other customers

Write a customer review

See all 739 customer reviews ›

Top Customer Reviews

Perfect toast
By PennyForYourThoughts on April 14, 2014

Style Name: Keep Warm 2-Slice | Verified Purchase
I had bought a more expensive, name brand toaster a couple of years ago and absolutely hated it! I finally decided to look fo
choices. I saw this one and loved the feature that keeps toast warm for 3 minutes. When it arrived, I was a little worried abou
to be well made. So far, so good! I've been happy with the way toast has turned out each time (my last toaster either underco
I find, with the defrost setting, the frozen waffles turn out great as well. The only thing I was surprised about was that the toas
then it gives a beeping signal right before it pops up. It was a good thing for me because I tend to forget about my toast and
had it, the kids were making toast and I woke up wondering what all the beeping was about ;) I must have overlooked that feat
It's turned out to be more good then bad.

3 Comments | 148 of 150 people found this helpful. Was this review helpful to you? Yes No Report abuse

Good toaster, great price, strange cord placement
By Jim Buchman on June 8, 2014

Style Name: Keep Warm 2-Slice | Verified Purchase
What we like: We LOVE the keep warm feature, and to have it on such an inexpensive product is great. Some people complai
what in our kitchens doesn't beep these days? The slots are wide enough for almost any breakfast carb, but the inside holders
toasting.

Here's one big issue however: The electrical cord is attached toward the front of the toaster and comes out of the bottom, an
the toaster closer to the wall, under the cabinets, or facing the other direction, because of the cord placement. It would have

Peace Ike co
Chris Carson

Paige Marta

Posted by Anonymous

I hate when my boyfrien
what he wants

	Desire *to*	Desire *not to*
Obtain information	Curiosity	Information avoidance 
Share information	Desire to reveal	Privacy

Information Avoidance

- **Definition of information avoidance:**
  - Individual must know that information exists
  - Must be costless to acquire (or costly to avoid)
- **Methods of information avoidance**
  - Physical avoidance
  - Inattention
  - Biased interpretation of information
  - Forgetting

HEALTH

Supreme Court Spikes North Carolina's Forced Ultrasound Law

BY TARA CULP-RESSLER JUN 15, 2015 10:20 AM

Share 5,257 Tweet

North Carolina will not be allowed to enact one of the most radical forced ultrasound laws in the country, thanks to the Supreme Court's decision on Monday to avoid reviewing the law.

The Court's decision is a victory for reproductive rights proponents, who challenged North Carolina's law on First Amendment grounds — pointing out that the measure essentially forced doctors to deliver an anti-abortion message on behalf of the state. The justices are allowing to stand a unanimous decision from the U.S. Court of Appeals for the Fourth Circuit that agreed the law violated doctors' right to free speech.

The law in question would require abortion patients to listen to a detailed description of their ultrasound before being allowed to continue with their pregnancy termination. The legislation includes very specific language that abortion doctors must relay. For instance, they must tell their patients about the fact that "the father is liable to assist in the support of the child" and "the woman has other alternatives to abortion, including keeping the baby or placing the baby for adoption," as well as information about her fetus' "anatomical and physiological characteristics."

Even if the patient attempted to avoid that information by closing her eyes and covering her ears, North Carolina's law makes doctors legally obligated to continue speaking.

Golman, Hagmann & Loewenstein (2016). Information Avoidance. *Journal of Economic Literature*.

Reasons for information avoidance

- Strategic
  - Intrapersonal
    - As commitment device (e.g., with compound lotteries)
    - Motivation maintenance
    - Preventing choking
    - Avoiding projection bias (e.g., curse of knowledge)
    - Abdicating responsibility (also interpersonal)
    - Saving it for later (e.g., mystery novel)
  - Interpersonal
    - Plausible deniability
    - Strategic benefits (from public avoidance)
- Hedonic…

Dana, Weber and Kuang (2007)

	State	
Choice	I	II
A	6,1	6,5
B	5,5	5,1

The dictator knows his own payoffs and can choose to costlessly reveal his partner's payoffs, which depend on the state

First hedonic reason for information avoidance: **Optimism maintenance** (e.g., Brunnermeier & Parker, 2005)

Lots of evidence with respect to medical tests – e.g., Oster et al. (2013) study of Huntington's testing

- low rates of testing and high rates of optimism among those at risk for but untested
- At-risk people who don't get tested make similar life decisions as those who get tested and learn they don't have the condition, but very different from those who learn they do have the condition

Laboratory study: Eil and Rao (2011)

- Had people either take an intelligence test or have their attractiveness rated by other subjects
- Gave them preliminary partial information
  - Those who got initial feedback that was below their expectations didn't want more information (and some were willing to pay not to get it)
  - Those who got favorable feedback updated their beliefs positively
  - Those who got negative feedback did not update their beliefs (negatively)

Second hedonic reason for information avoidance: Belief investments

Basic intuition:

- People make investments based on their beliefs
- Discarding their beliefs would mean writing off those (sunk) investments
- Confronted with other people who have different beliefs, forced to recognize that they might be the one who is wrong
- Avoid encounters with other people or stimuli that might challenge their beliefs

Consequences: People..

- sort geographically on basis of beliefs; avoid interacting with people holding different beliefs
- avoid 'conversational mine-fields'
- expose themselves to media consistent with their existing beliefs
- proselytize to try to bring others' beliefs into conformity with their own
- seek to silence (in some cases by killing) those they disagree with

Golman, Loewenstein, Moene & Zarri (forthcoming). The Preference for Belief Consonance. *Journal of Economic Perspectives*.

Third hedonic reason for information avoidance:

Attention Effect (knowing is, at least in the short-run, more painful than suspecting)

A simple model of investor look-up behavior (Karlsson et al., 2009):

$$V = \sum_{t \in T} (1 + \alpha A_t)\, \mu(W_t^* - r_{t-1})$$

A_t=1: investor 'looks' at time t

A_t=0: investor doesn't look

μ is loss-averse utility function

α: extra marginal utility impact of information when investor looks (α>0)

W^*: actual or expected wealth

Reference point (r) dynamics:

if looks: $r_t = W_t$

if doesn't look: $r_t = \theta\, E(W_t) + (1-\theta)\, r_{t-1}$

Given plausible parameter values, the model predicts selective looking when the market is up – an *ostrich effect*

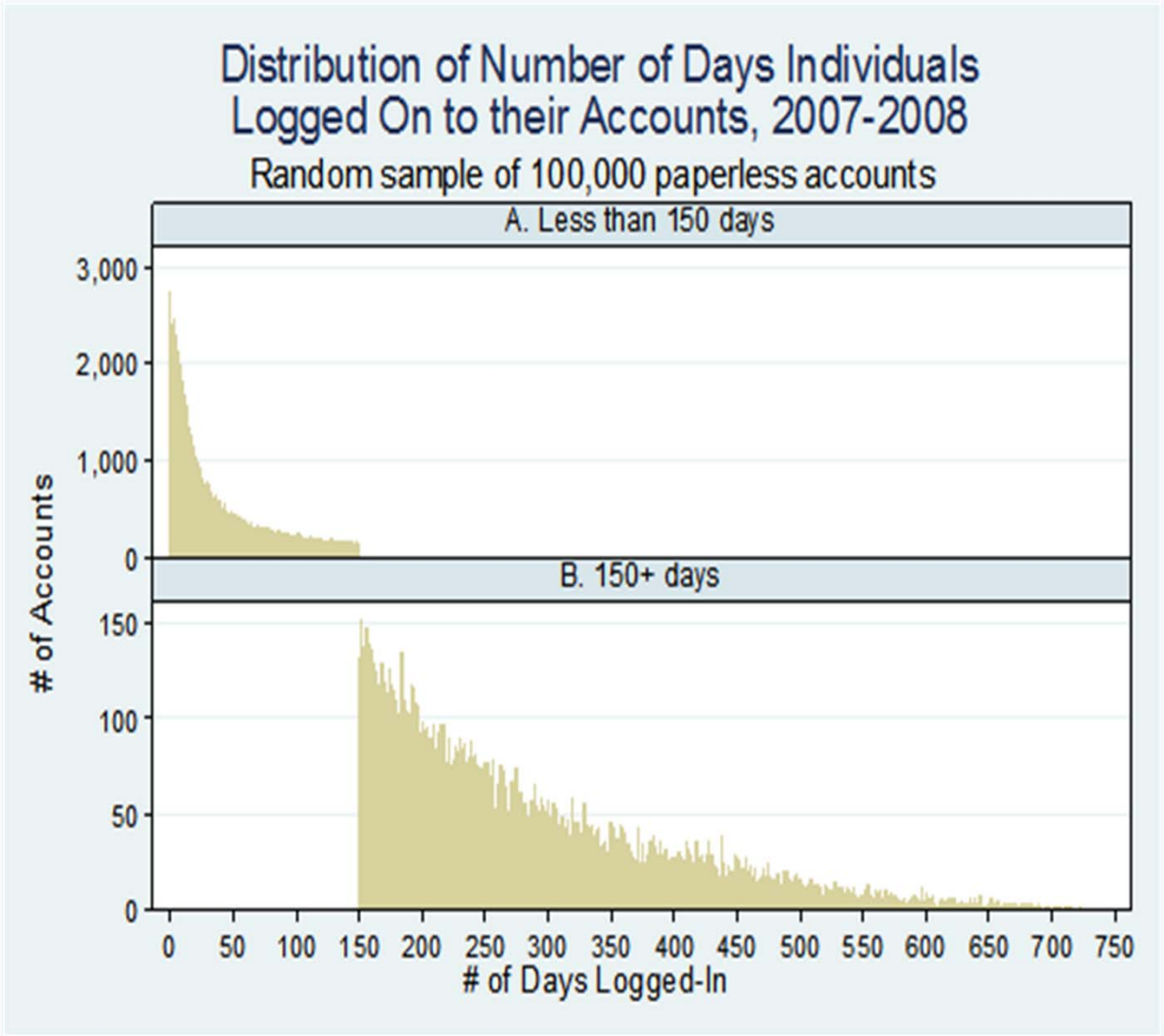
A study of the ostrich effect..

- Panel of 1.1 million defined contribution accounts over 2007-2008 at Vanguard
- Logins and trading observed daily over 2 years. *N* = 853 million day/investor obs.
- Focus on 100k subsample of "paperless" accounts

Variable	Paperless	Full Sample
Age (years)	45.80/45.57 (10.44)	46.33/46.46 (10.44)
% Female	0.316 (.465)	0.369 (.482)
Tenure with Employer (years)	12.45/10 (8.92)	13.13/10 (9.32)
% Equity in account	77.12/86 (26.83)	73.39/83 (29.14)
Account Balance (dollars)	$118,900/59,925 (187,663)	$102,973/50,224 (173,815)
Wealth (dollars)	$420,570/90,816 (1,161,023)	$336,675/60,540 (1,021,342)

Sicherman, Loewenstein, Seppi & Utkus (2016). "Financial Attention." *Review of Financial Studies*

Distribution of logons (lookups)

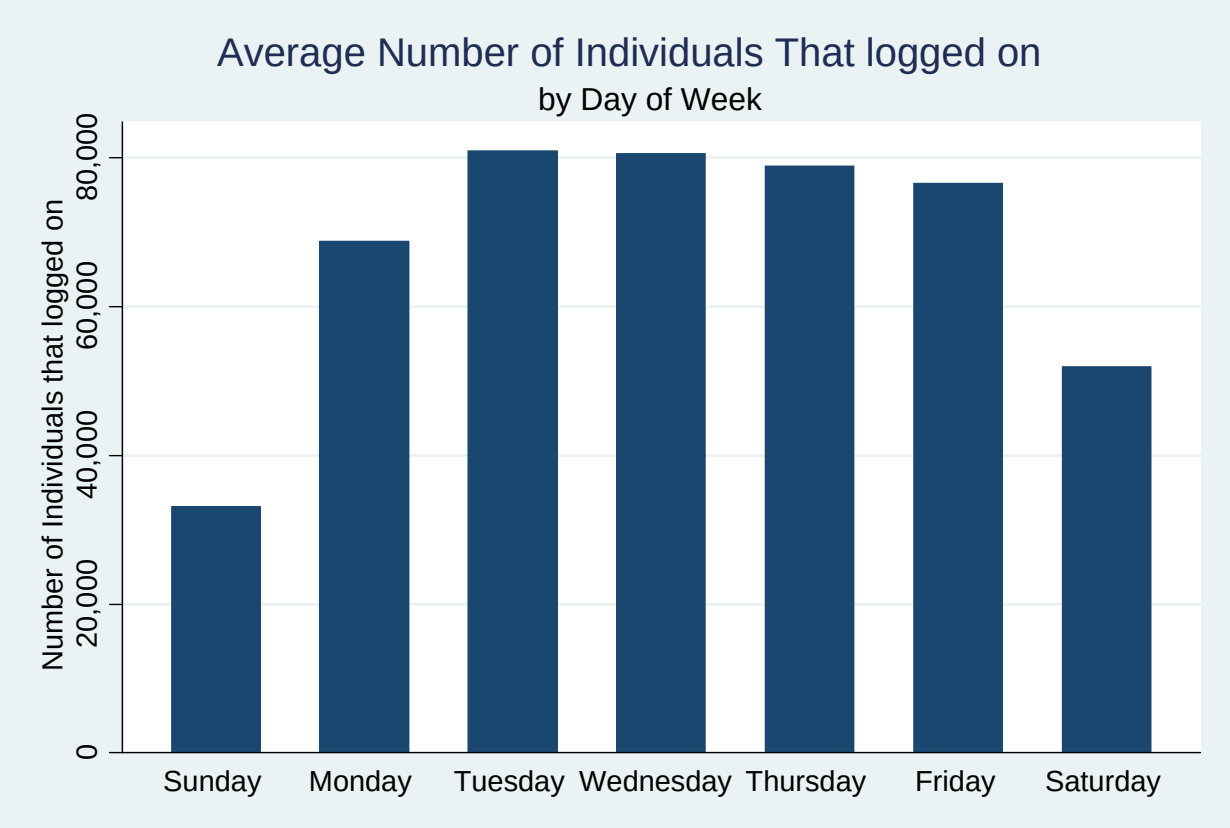


Lookup frequency

0	2.7%
1	2.4%

> half of trading days 4.2%

Day-of-week effect

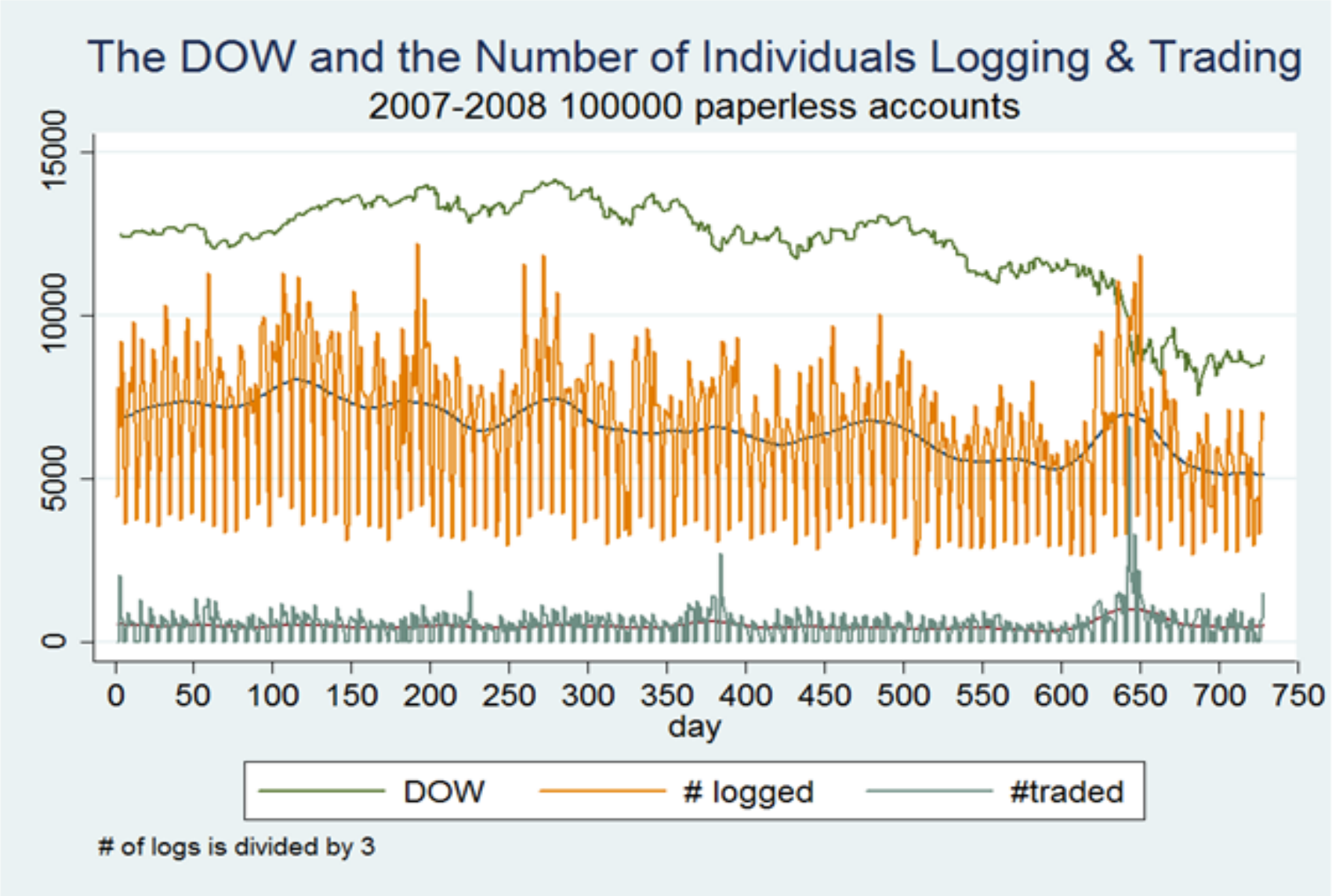


Trading v. logins as a measure of investor attention

Table 2
Distribution of Days with Logins and Days with Trading
Vanguard 100k paperless accounts, 2007-2008

Percentile	Logins	Trades
1%	0	0
5%	1	0
10%	4	0
25%	11	0
50%	36	1
75%	115	2
90%	242	5
95%	338	8
99%	507	21
mean	85.2	2.03
Std. Dev.	113.32	5.19
skewness	2.08	11.59

Lookups, trades and market changes



Simple test of ostrichness

Table 3a

Individuals Logging-on and the Change in the DOW

OLS Regression results, Vanguard 401K Panel Data, 100,000 paperless accounts

	2007-2008		2007		2008	
	1	2	3	4	5	6
DOW down dummy	-0.017***		-0.019***		-0.010***	
	(0.000)		(0.000)		(0.000)	
daily % change in dow		0.344***		0.936***		0.218***
		(0.004)		(0.011)		(0.004)
Constant	0.154***	0.145***	0.166***	0.157***	0.139***	0.134***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Day of Week Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Adusted R^2	0.01	0.01	0.01	0.01	0.01	0.01
N	44418050	44418050	22038434	22038434	22379616	22379616

* clustred SE in parentheses

* p<.10, ** p<.05, *** p<.01

Different change intervals..

Table 5
Individuals Logging-on and "Market Down Dummy" (using the DOW)
OLS Regression results, Vanguard 401K Panel Data, 2007-2008, 100,000 paperless accounts

	2007-2008				2007				2008			
Down Dummy	1	2	3	4	5	6	7	8	9	10	11	12
prev. trading day	-0.0171***			-0.0162***	-0.0192***			-0.0172***	-0.0096***			-0.0098***
	(0.0002)			(0.0002)	(0.0002)			(0.0002)	(0.0002)			(0.0002)
prev. 5 trading days		-0.0172***				-0.0193***				-0.0066***		
		(0.0002)				(0.0002)				(0.0002)		
prev. 20 trading days			-0.0181***				-0.0175***				-0.0037***	
			(0.0002)				(0.0002)				(0.0002)	
4 days prior to last trading day				-0.0088***				-0.0090***				-0.0005***
				(0.0001)				(0.0002)				(0.0001)
15 days prior to last 5 trading days				-0.0125***				-0.0175***				0.0051***
				(0.0002)				(0.0002)				(0.0002)
Constant	0.1543***	0.1544***	0.1555***	0.1646***	0.1660***	0.1661***	0.1652***	0.1756***	0.1391***	0.1373***	0.1358***	0.1362***
	(0.0007)	(0.0007)	(0.0007)	(0.0008)	(0.0008)	(0.0008)	(0.0008)	(0.0008)	(0.0007)	(0.0007)	(0.0007)	(0.0007)
Day of Week Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adusted R^2	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
N	44418050	44418050	44418050	44418050	22038434	22038434	22038434	22038434	22379616	22379616	22379616	22379616

* clustred SE in parentheses
* p<.10, ** p<.05, *** p<.01

Table 6
Correlations between Measures of Individual Investor "Ostrichness"
Daily, Weekly, and Monthly Indicators of Market Change

	Simple Correlation			Spearman Correlation		
	day	week	month	day	week	month
day	1			1		
week	.61	1		.47	1	
month	.64	.79	1	.50	0.65	1

How many ostriches?

Table 4
Ostrich Classification of Investors
Based on Estimated DOWN Coefficients in Individual Investor Regressions
Daily account data for 100,000 401K accounts for 2007-2008

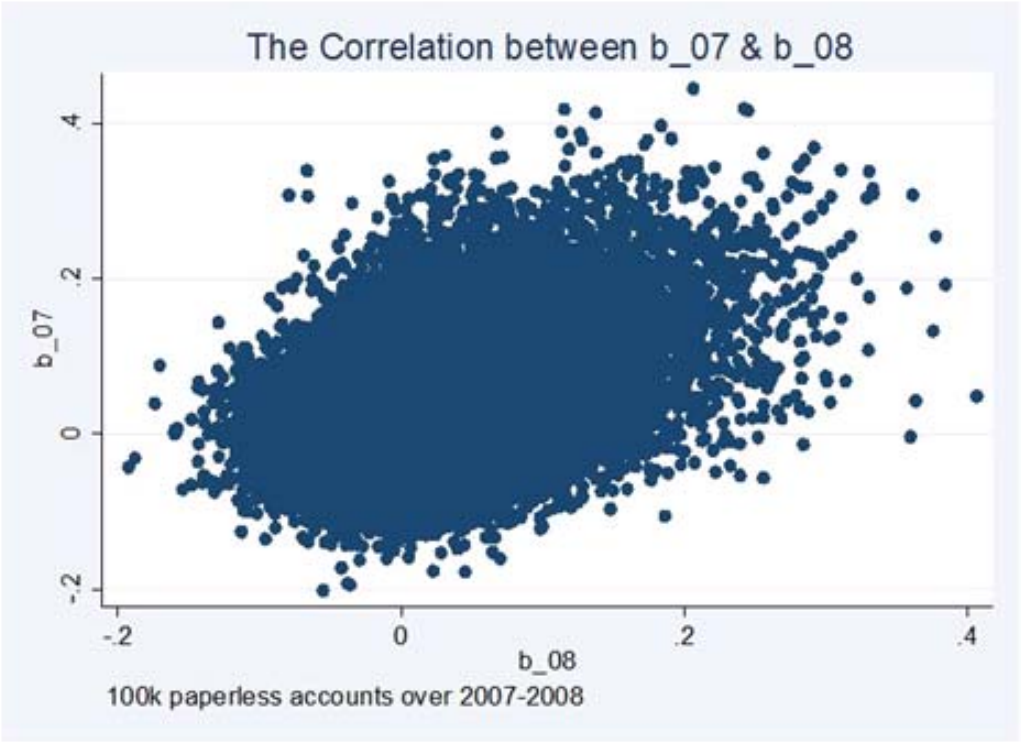
Full Sample			Only Significant Coefficients	
Ostrich	Freq.	Percent	Freq.	Percent
No (β >0)	43,426	43.43	2,900	20.92
Yes (β<0)	53,841	53.84	10,962	79.08
No logins	2,733	2.73	n.a.	n.a.
Total	100,000	100	13,862	100

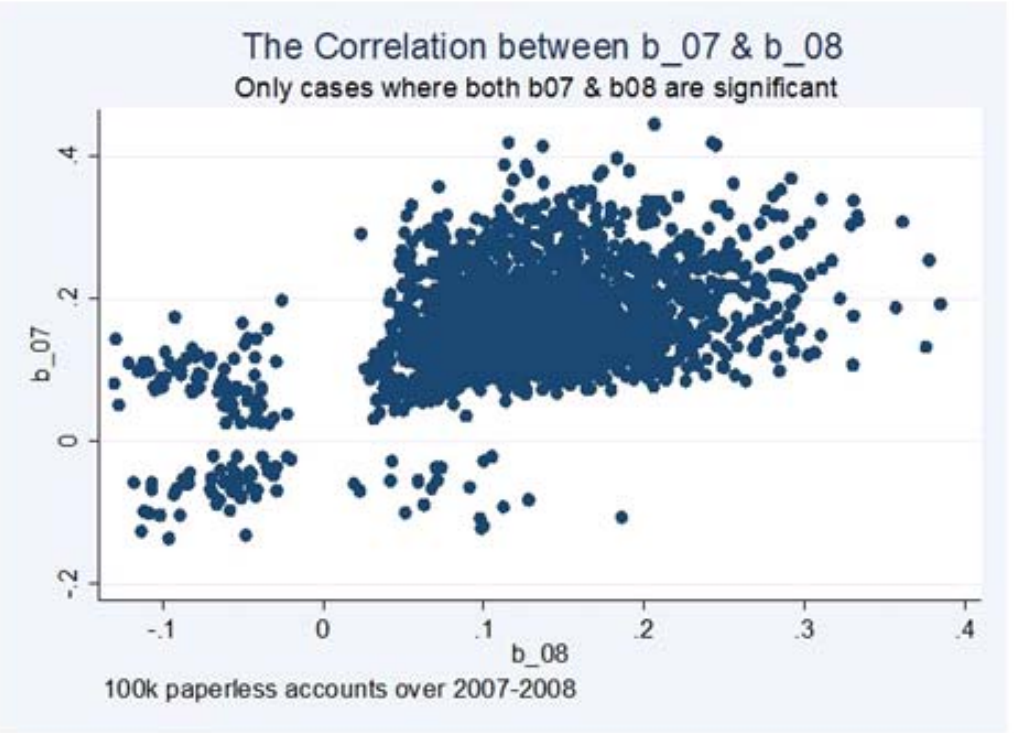
What about bond holders?

Table 10
Ostrich Classification of Investors with Zero-Equity Accounts
1+ million Vanguard accounts, 2007-2009

Full Sample			Only Significant Coefficients	
Ostrich	Freq.	Percent	Freq.	Percent
No (β>0)	22,122	33.28	1,148	67.25
Yes (β<0)	16,915	25.45	559	32.75
No logins	27,431	41.27	n.a	n.a.
Total	66,468	100	1,707	100

Once an ostrich, always an ostrich?



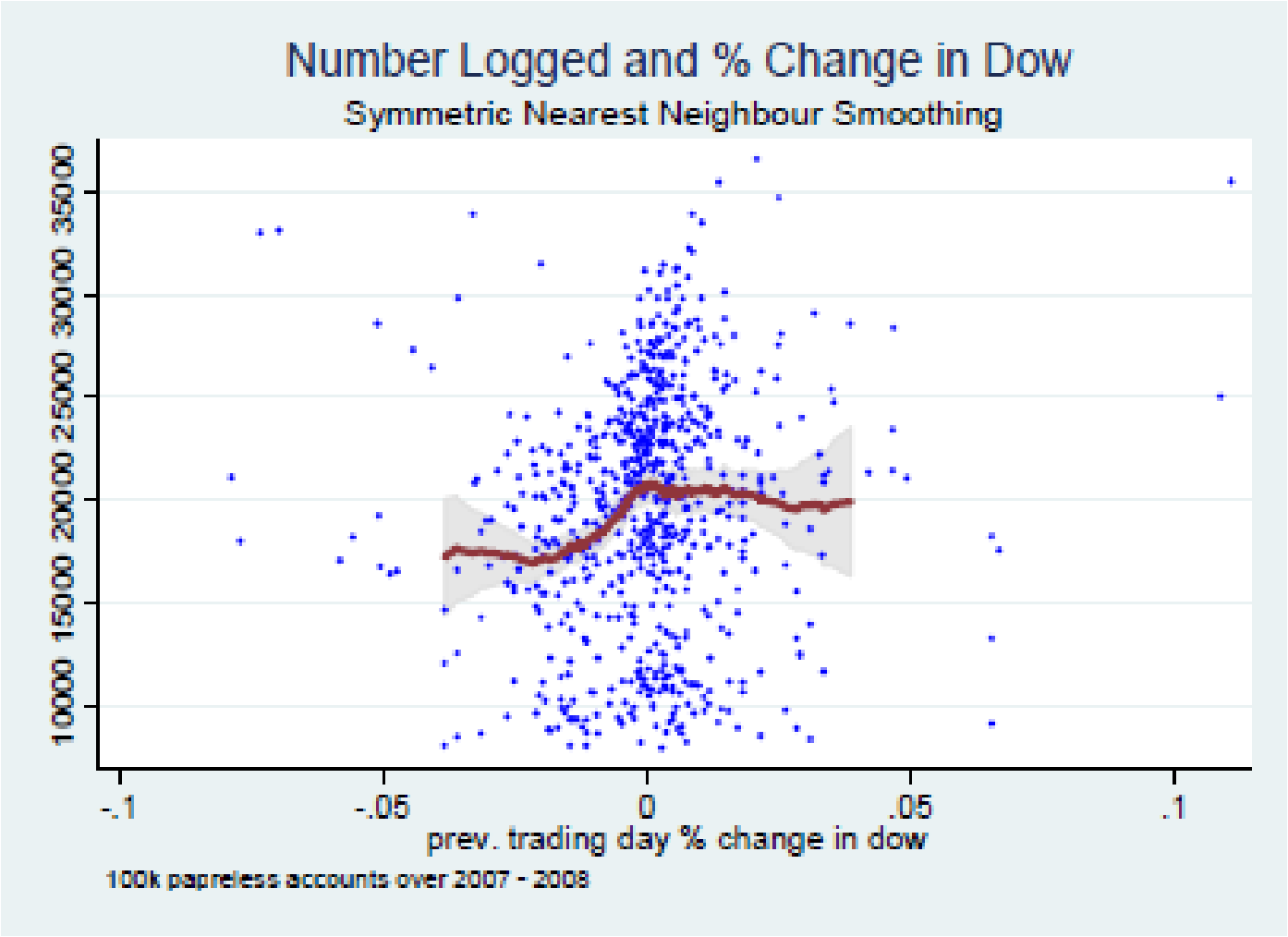


Simple correlation = 0.393
Spearman rank correlation = 0.173

Simple correlation = 0.459
Spearman rank correlation = 0.367

Do people login more in up markets or less in down markets?

Figure 8



A strong test that it's really psychology: double-weekend logins

Table 8

Friday Market Returns and the (log of) Number of Logins on Sunday for Investors who Logged-in on Saturday

	1	2	3
% Change in the DOW on Friday	2.863**	1.876	
	(1.122)	(1.146)	
% Change in the DOW over the week		1.235***	1.479***
		(0.462)	(0.441)
Constant	8.008***	8.011***	8.011***
	(0.017)	(0.016)	(0.017)
Adjusted R^2	0.06	0.12	0.10
N	92	92	92

* Standard Errors in parentheses

*p<.10, **p<.05, ***p<.01

Individual differences in logins and in ostricity..

Table 8

OLS Regressions Results for the Likelihood of a Login, Market Changes, Investors and Account Characteristics, and the Interaction Between Market Change and these Characteristics

	1	2	3	4	5	6	7	8	9	10
DOW down dummy	-0.0171***	-0.0172***	-0.0158***	-0.0199***	0.0250***	-0.0149***	-0.0108***	-0.0208***	0.1122***	0.1353***
	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0031)	(0.0003)	(0.0002)	(0.0002)	(0.0023)	(0.0039)
If Female		-0.0508***	-0.0454***	-0.0515***	-0.0454***	-0.0454***	-0.0454***	-0.0454***	-0.0454***	-0.0500***
		(0.0014)	(0.0014)	(0.0015)	(0.0014)	(0.0014)	(0.0014)	(0.0014)	(0.0014)	(0.0015)
Age on 12/31/08		-0.0080***	-0.0084***	-0.0084***	-0.0079***	-0.0084***	-0.0084***	-0.0084***	-0.0084***	-0.0082***
		(0.0006)	(0.0006)	(0.0006)	(0.0006)	(0.0006)	(0.0006)	(0.0006)	(0.0006)	(0.0006)
Age^2		0.0001***	0.0001***	0.0001***	0.0001***	0.0001***	0.0001***	0.0001***	0.0001***	0.0001***
		(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
College		-0.0080***	-0.0100***	-0.0100***	-0.0100***	-0.0091***	-0.0100***	-0.0100***	-0.0100***	-0.0101***
		(0.0014)	(0.0014)	(0.0014)	(0.0014)	(0.0014)	(0.0014)	(0.0014)	(0.0014)	(0.0014)
Account Balance (10,000)			0.0009***	0.0009***	0.0009***	0.0009***	0.0011***	0.0009***	0.0009***	0.0010***
			(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0001)	(0.0000)	(0.0000)	(0.0001)
Percent Bonds			0.0009	0.0009	0.0010	0.0009	0.0010	-0.0097***	0.0012	-0.0134***
			(0.0024)	(0.0024)	(0.0024)	(0.0024)	(0.0024)	(0.0025)	(0.0024)	(0.0025)
AccountMonthly Return			0.1226***	0.1224***	0.1233***	0.1225***	0.1234***	0.1210***	0.1950***	0.1937***
			(0.0032)	(0.0032)	(0.0032)	(0.0032)	(0.0032)	(0.0032)	(0.0037)	(0.0037)
(Dow-down)*Female				0.0127***						0.0097***
				(0.0004)						(0.0004)
(Dow-down)*Age					-0.0010***					-0.0006***
					(0.0001)					(0.0001)
(Dow-down)*Age^2					0.0000**					-0.0000
					(0.0000)					(0.0000)
(Dow-down)*College						-0.0018***				0.0001
						(0.0004)				(0.0004)
(Dow-down)*account Balance							-0.0003***			-0.0002***
							(0.0000)			(0.0000)
(Dow-down)*(Percent Bonds)								0.0219***		0.0303***
								(0.0006)		(0.0006)
(Dow-down)*Monthly Return									-0.1293***	-0.1289***
									(0.0023)	(0.0023)
Constant	0.1543***	0.2992***	0.1903***	0.1923***	0.1700***	0.1898***	0.1870***	0.1943***	0.1185***	0.1086***
	(0.0007)	(0.0129)	(0.0134)	(0.0134)	(0.0140)	(0.0134)	(0.0134)	(0.0134)	(0.0136)	(0.0141)
Day of Week Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R^2	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
N	44418050	40323260	40323260	40323260	40323260	40323260	40323260	40323260	40323260	40323260
* clustred SE in parentheses										
* p<.10, ** p<.05, *** p<.01										

Fixed Effects

Table 9

Fixed Effects OLS Regressions Results for the Likelihood of a Login, Market Changes, Investors and Account Characteristics, and the Interaction Between Market Change and these Characteristics

	1	2	3	4	5	6	7	8
DOW down dummy	-0.0172***	-0.0170***	-0.0158***	-0.0170***	-0.0108***	0.1158***	-0.0203***	0.1154***
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0019)	(0.0001)	(0.0019)
Account Balance (10,000)		0.0021***			0.0019***	0.0018***	0.0017***	0.0019***
		(0.0000)			(0.0000)	(0.0000)	(0.0000)	(0.0000)
AccountMonthly Return			0.1318***		0.1084***	0.1816***	0.1058***	0.1808***
			(0.0009)		(0.0010)	(0.0014)	(0.0010)	(0.0014)
Percent Bonds				-0.0349***	-0.0301***	-0.0299***	-0.0402***	-0.0416***
				(0.0004)	(0.0004)	(0.0004)	(0.0004)	(0.0004)
(Dow-down)*account Balance					-0.0003***			-0.0003***
					(0.0000)			(0.0000)
(Dow-down)*Monthly Return						-0.1329***		-0.1327***
						(0.0019)		(0.0019)
(Dow-down)*(Percent Bonds)							0.0200***	0.0232***
							(0.0003)	(0.0003)
Constant	0.1545***	0.1242***	0.0234***	0.1623***	0.0261***	-0.0448***	0.0329***	-0.0434***
	(0.0001)	(0.0002)	(0.0009)	(0.0001)	(0.0010)	(0.0014)	(0.0010)	(0.0014)
Day of Week Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R^2	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
N	44418050	44418050	44418050	44418050	44418050	44418050	44418050	44418050

* Standard errors in parentheses

* p<.10, ** p<.05, *** p<.01

Do ostriches log in or trade more?

Table 13a
Mean Number of Days with Logins & Days with Trading
by Investor ostrich tendencies

Investor Type	Days with Logins	Days with Trading
Ostrich	179.6	3.6
Moderately-Ostrich	103.1	2.2
Moderately-Anti-Ostrich	59.3	1.7
Anti-Ostrich	89.0	2.0
The Rest	71.7	1.8
Total	85.2	2.0

Distribution of Investors by their Level of “Ostrichness” and their Tendency to Trade Conditional on Market Trend (Up or Down)

	Significant (t>2)		**Moderate (1<t<2)**	
	Trade Down	Trade Up	Trade Down	Trade Up
Ostrich	172	178	3,096	2,610
Anti-ostrich	177	25	2,908	117

- **Why information avoidance matters:**
  - Deprives people of potentially useful information
    - e.g.,
      - Medical tests
      - Teaching ratings (other type of feedback such as videos)

Sicherman, N. Loewenstein, G., Tvassoli, T. & Buxbaum, J. (under review). Grandma Knows Best: Family Structure and Age of Diagnosis of Children with Autism Spectrum Disorder.

- Survey with 477 parents of children diagnosed with ASD.
- Additional short survey with 196 "friends and family" referred by parents. 58% saw child at least once a week around time of diagnosis
- Collected information about family structure, interactions with family and friends, and age of diagnosis, etc.

Results:

- 25% of parents reported that other people indicated concern that the child "might have a serious condition" before they started suspecting
- 48% of friends and family respondents report they suspected child had a serious condition before, they believe, either parent was concerned.

  Among these..
  - 51% claim to have expressed their concern to parents.
  - 27% "hinted concern"
  - 22% report did not express their concerns
- Frequent interaction with a grandmother reduces the age of diagnosis by 5.18 months (p=0.026).

Table 2
Person Who Indicated Concern Before Parents

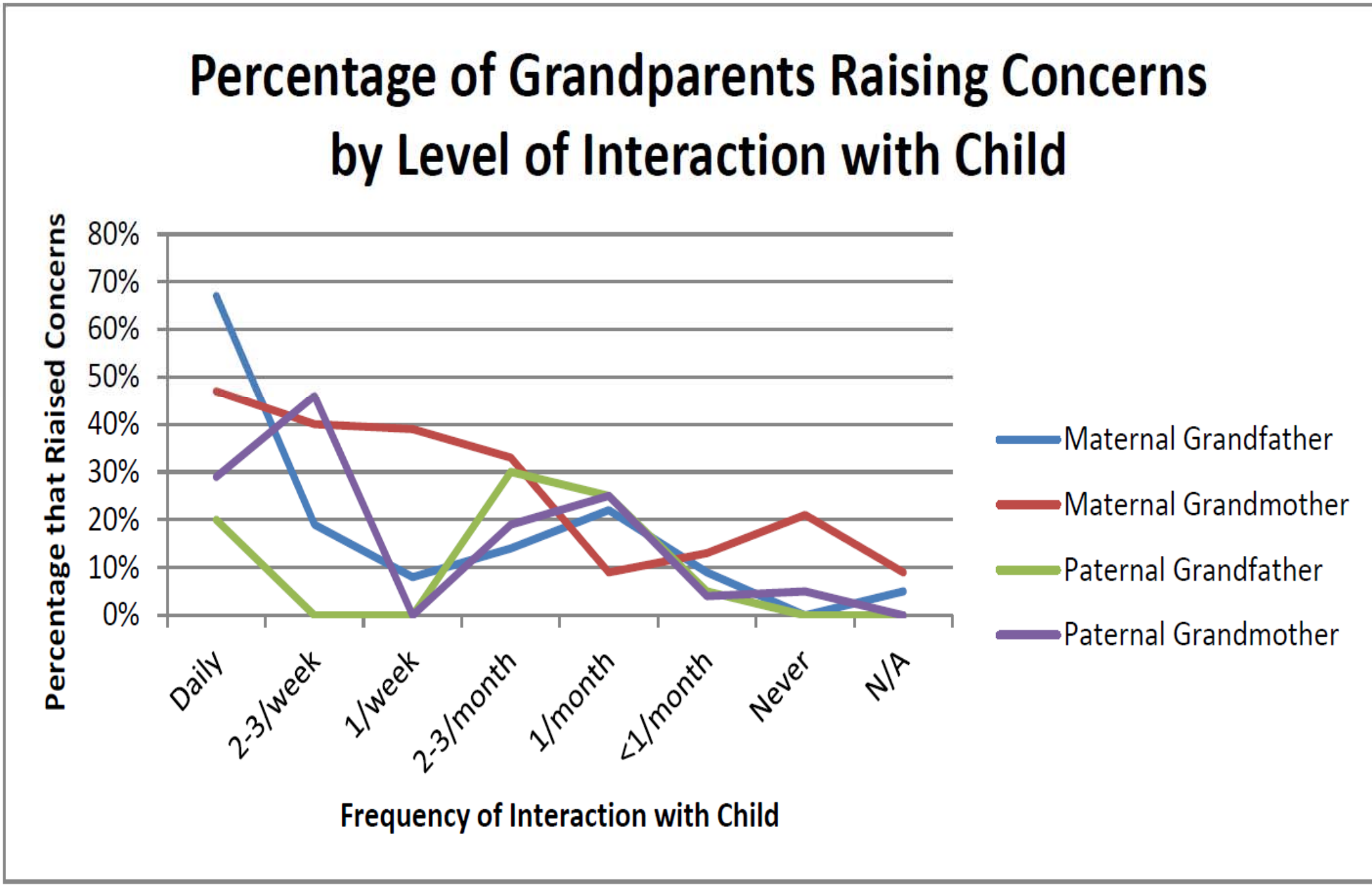
Person	Percent
Maternal Grandmother	27%
Teacher	24%
Aunt Uncle	17%
Maternal Grandfather	14%
Family Friend	13%
Paternal Grandmother	12%
Caretaker	12%
Health Professional	12%
Paternal Grandfather	6%
Sibling	4%
Neighbor	1%

Table 3
Effect of Interactions* with Grandparents on Age of Diagnosis

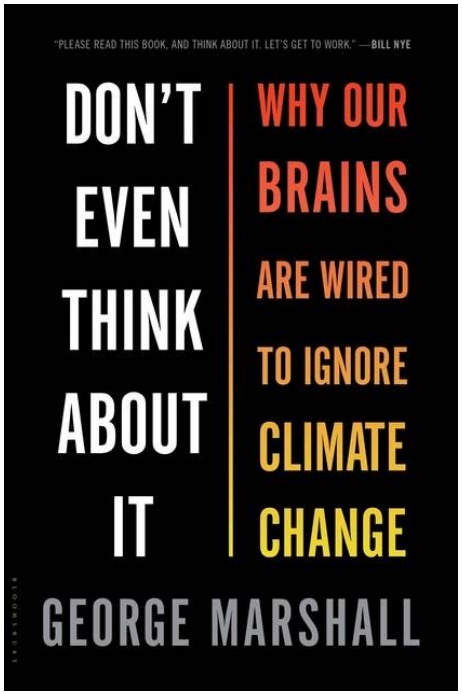
	1	2	3
Grandmother	-5.18**		-6.84**
	(0.026)		(0.017)
Grandfather		-3.78+	1.11
		(0.105)	(0.705)
Either Grandparent			
Constant	59.35***	57.90***	60.65***
	(0)	(0)	(0)
R^2	0.218	0.201	0.217
N	372	361	356

*Interacts at least once a week

Figure 1


Percentage of Grandparents Raising Concerns by Level of Interaction with Child
Percentage that Riaised Concerns
80%
70%
60%
50%
40%
30%
20%
10%
0%
Daily
2-3/week
1/week
2-3/month
1/month
<1/month
Never
N/A
Frequency of Interaction with Child
Maternal Grandfather
Maternal Grandmother
Paternal Grandfather
Paternal Grandmother

- **Why information avoidance matters:**
  - Deprives people of potentially useful information
    - e.g.,
      - Medical tests
      - Teaching ratings (other type of feedback such as videos)
  - Reinforces confirmation bias, groupthink
  - Contributes to media bias, polarization



"The bottom line is that we do not accept climate change because we wish to avoid the anxiety it generates and the deep changes it requires. In this regard, it is not unlike any other major threat. However, because it carries none of the clear markers that would normally lead our brains to overrule our short-term interests, we actively conspire with each other, and mobilize our own biases to keep it perpetually in the background" (page 228).

It isn't an issue of ignorance

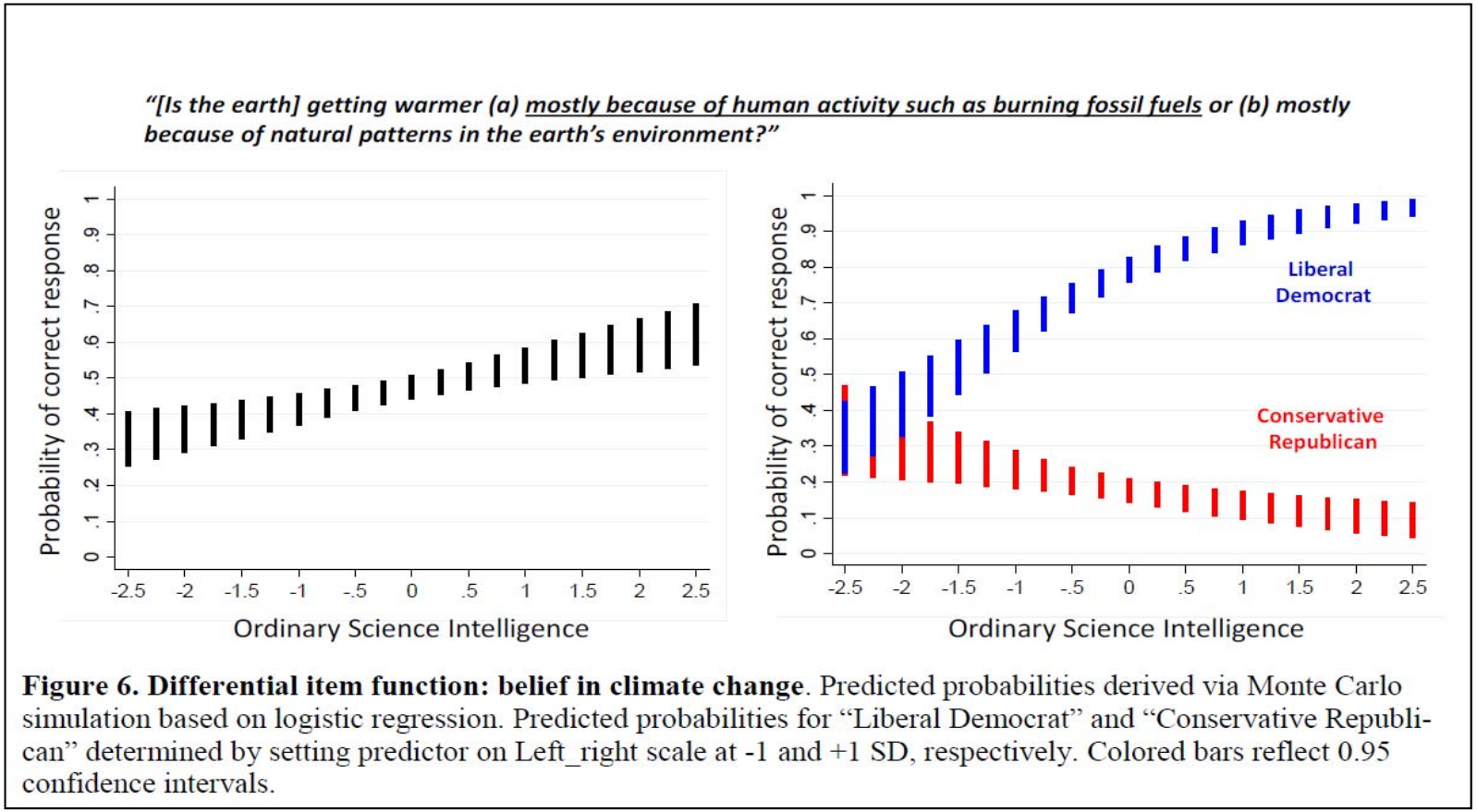


Figure 6. Differential item function: belief in climate change. Predicted probabilities derived via Monte Carlo simulation based on logistic regression. Predicted probabilities for "Liberal Democrat" and "Conservative Republican" determined by setting predictor on Left_right scale at -1 and +1 SD, respectively. Colored bars reflect 0.95 confidence intervals.

Dan M. Kahan (forthcoming). Climate Science Communication and *the* Measurement Problem. *Advances in Political Psychology.*

Mattress Girl Study (with Nik Gurney)

N=471 paid subject pool participants (8 excluded due to failing attention check)
Choose which of two essays, one short and one long, to read and answer questions about. One essay written by a friend of Amy Sulkowicz, the other by a friend of Paul Nungesser.
Two conditions:

Condition 1	Condition 2
Sulkowicz friend essay short	Nungesser friend essay short
Nungesser friend essay long	Sulkowicz friend essay long

Asked questions about their position on the issue, need for closure scale, preference for coherence scale, demographics
Secondary: module on investments in religion and attitudes toward religious people and atheists

Choice of long essay

	Nungesser long	Sulkowicz long
Support Sulkowicz	35%	56%
Support Nungesser	41%	34%

Logistic regression analysis: Choice Long = constant + B1 support mattress girl + B2 mattress girl long + B3 support mattress girl * mattress girl long (interaction is the key term)

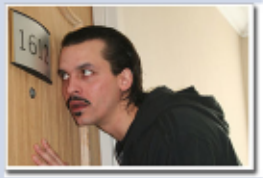
Value and significance of interaction term for different sub-populations

Overall	Need for closure		Preference for consistency		education		politics			gender	
	Low	high	Low	high	No college	college	Demo-crat	Republi-can	Indepe ndent	Female	male
1.17 P=.004	.16 P=.79	2.2 P<.0001	.48 P=.40	2.0 P=.001	.34 p=.11	1.8 P=.001	.75 P=.29	2.3 P=.10	3.2 P<.0001	.59 P=.28	1.8 P=.006

- **Why information avoidance matters:**
  - Deprives people of potentially useful information – e.g.,
    - Medical tests
    - Teaching ratings (other type of feedback such as videos)
  - Reinforces confirmation bias, groupthink
  - Contributes to media bias, polarization
  - Contributes to misbehavior – e.g., moral wiggle room, plausible deniability
  - But not always bad..
    - Happens for (often sensible) reasons
    - Can sometimes improve behavior – e.g., investing, teaching, etc.

Overall conclusions

- Our (economists') understanding of the desire for (and desire to avoid) information still at an early stage
- There are a multiplicity of motives, over and above the desire to improve decision making, driving the demand for information
- Sometimes the 'demand' for information is actually a desire to *avoid* information

	Desire *to*	Desire *not to*
Obtain information	Curiosity 	Information avoidance 
Share information	Desire to reveal 	Privacy