THE SOCIAL DESIRABILITY OF BELIEF IN GOD

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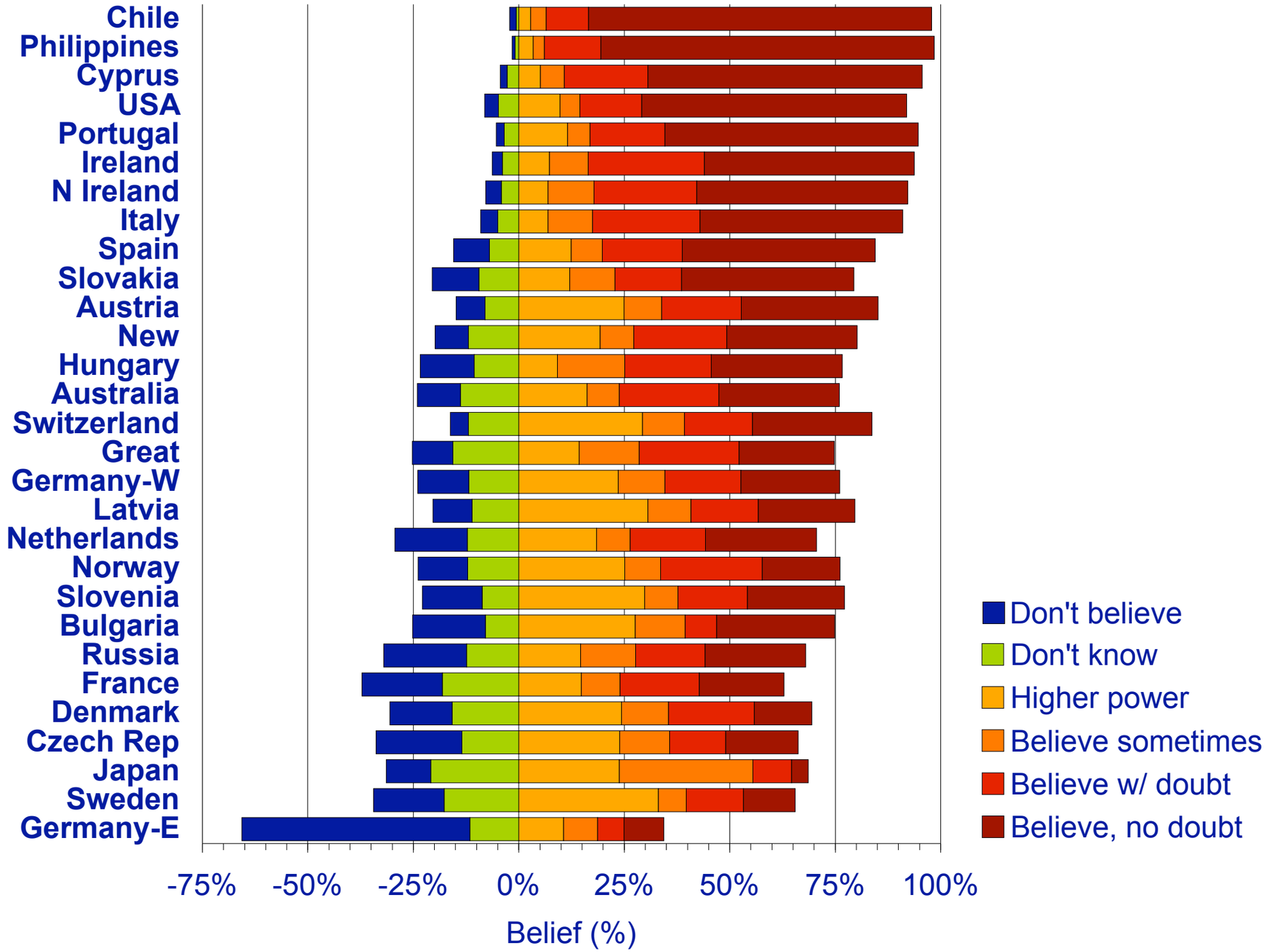
Religion in American politics

- overwhelming majorities of survey respondents report belief in God (80% - 90%).
- U.S. exceptional in this regard.
- role of religion in recent American political debate

Cross-national rates of belief in God &/or “higher power”, International Social Survey Program.



Courtesy of Mike Hout.

Question for public opinion research

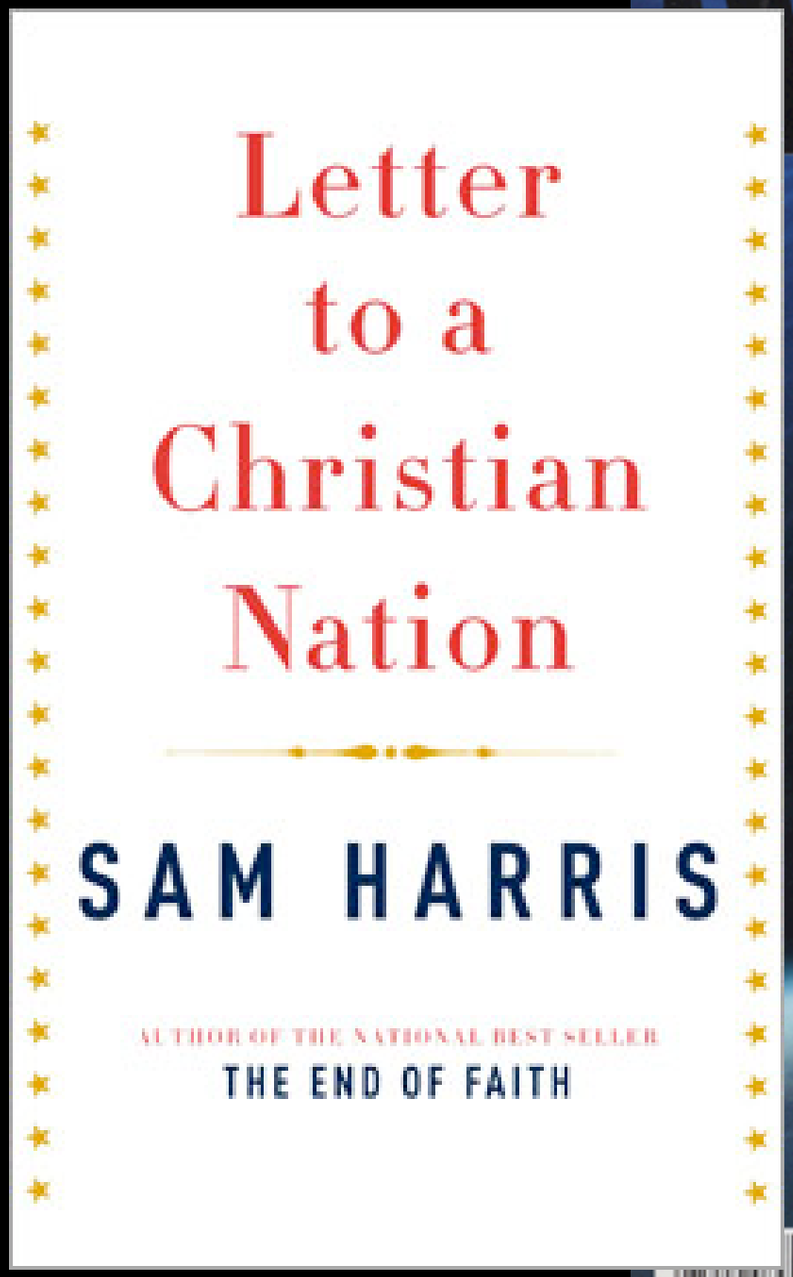
- overwhelming majorities of survey respondents report belief in God (80% - 90%).
- special normative/legal status of religious beliefs in American law, culture.
- atheism and/or agnosticism becomes a “sensitive” or “difficult” topic to survey

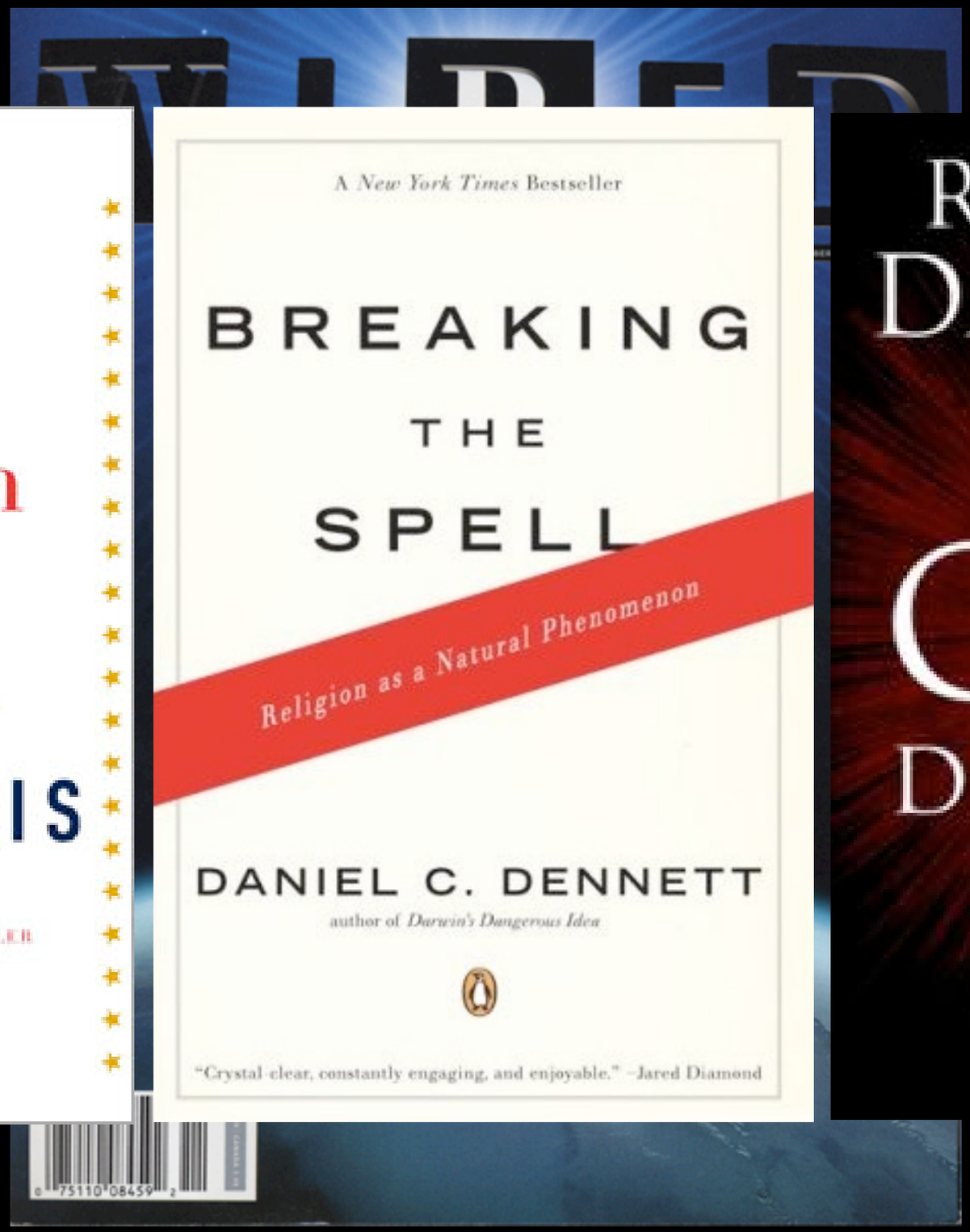
Empirical Project

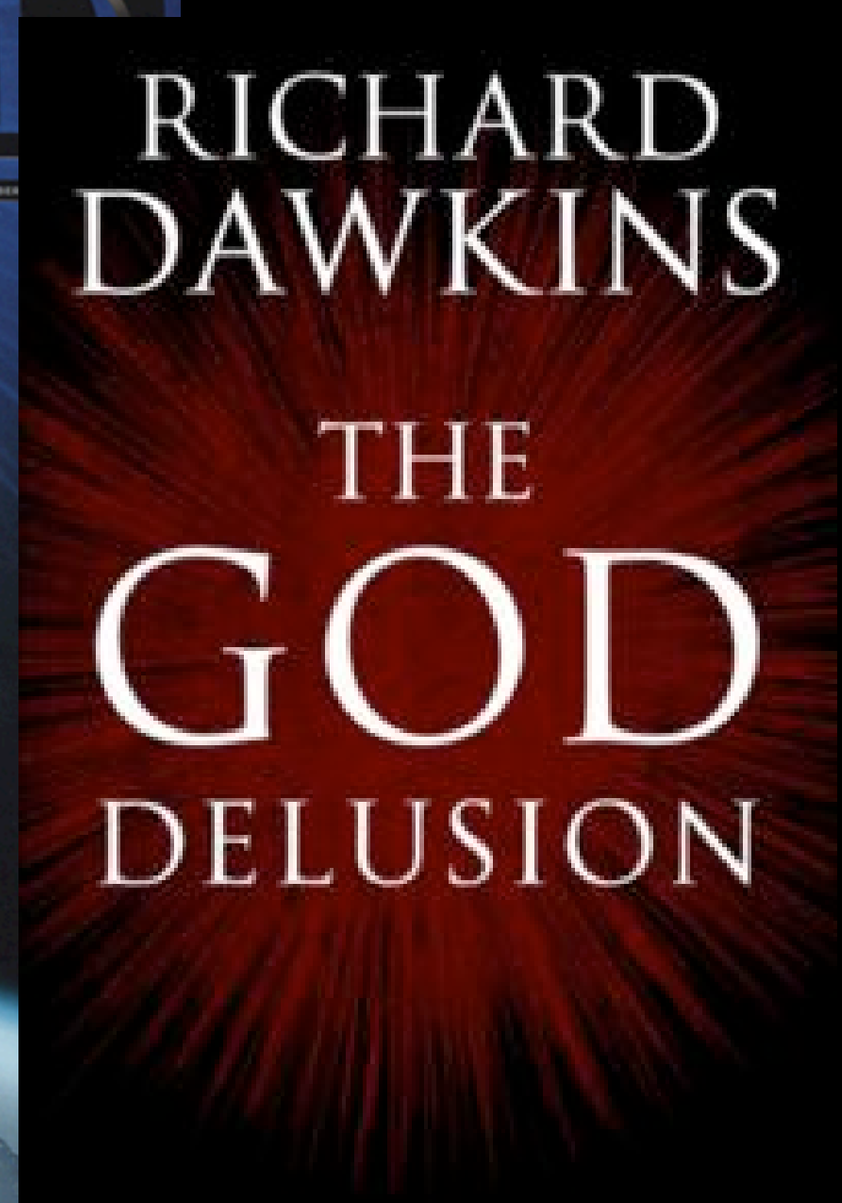
- can we get rid of any “social-desirability” bias in conventional measures of proportions of believers/atheists?
  - drug use
  - sexual behavior
  - voter turnout
- all instances of “sensitive topics”

Implementation in 2006 CCES

- on-line is “self-completion”; hence plausible that less social-desirability effects than face-to-face
- randomized response methods difficult to implement on-line (credibility of randomization)







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List Experiments

$$
\begin{aligned}
y_{ij} &\sim \text{Bernoulli}(\theta_j) \\
E(y_{ij}) &= \theta_j \\
E(y_i) &= \sum_j \theta_j
\end{aligned}
$$

$$
\begin{aligned}
\bar{y} &= n^{-1} \sum_{i=1}^{n} y_i \\
E(\bar{y}) &= n^{-1} \sum_{i=1}^{n} E(y_i) = n^{-1} \sum_{i=1}^{n} \sum_j \theta_j \\
&= \sum \theta_j
\end{aligned}
$$

List Experiments

- In control condition, $E(\bar{y}_C) = \sum_{j=1}^{J} \theta_j$
- In treatment condition, $E(\bar{y}_T) = \sum_{j=1}^{J+1} \theta_j$
- Hence $E(\bar{y}_T - \bar{y}_C) = \sum_{j=1}^{J+1} \theta_j - \sum_{j=1}^{J} \theta_j = \theta_{J+1}$
- Inference (standard errors, confidence intervals) is straightforward.

Kulkinski et al. 1997, *AJPS*

The list experiment we employed begins as follows:

"Now I'm going to read you three things that sometimes make people angry or upset. After I read all three, just tell me HOW MANY of them upset you. I don't want to know which ones, just HOW MANY."

With the ground rules established, the interviewer then read a list of three items:[3]

(1) "the federal government increasing the tax on gasoline;"
(2) "professional athletes getting million-dollar salaries;"
(3) "large corporations polluting the environment."

To assess the level of prejudice, the three items of the baseline list were repeated with a fourth item added; it takes the form, "a black family moving in next door."

Kulkinski et al. 1997, *AJPS*

Table 1. Mean Level of Anger Toward A Black Family Moving in Next Door, by Region (Whites Only)

Region	Experimental Condition		Estimated Percent Angry
	Baseline	Black Family	
Non-South	2.28[a]	2.24	0
	(.07)	(.05)	
	425[b]	461	
South	1.95	2.37	42
	(.06)	(.08)	
	139	136	

[a]Standard error of the estimate.
[b]Number of cases.

Data

- 2006 CCES, through Polimetrix
- 2 batches of 1,000 respondents ("Stanford" and "PMX")
- Randomization to treatment and control takes place as respondents administered survey
- Post-stratification weights applied

Split-third design

- Please look over the statements below. Please just tell us **how many** apply to you. We don't want to know which statements apply to you, just **how many**.
  - I have had dreams in which I see myself dying.
  - I believe in life after death.
  - I believe miracles sometimes happen.
- Treatment 1: adds “I do not believe in God”
- Treatment 2: adds “I believe in God”

Randomization

- After matched/selected subject voluntarily opt-ins to web survey, then randomization takes place.
- Post-stratification weights provided. Range from .5 to 3.5.
- Do we have balance across branches of experiment?

Balance check in Stanford batch

- Educational attainment, three ordinal categories. $\chi^2_4 = 7.24$, $p = .12$. ANOVA: $F_{2,456} = 1.41, p = .244$
- Ideological self-placement, three categories. $\chi^2_4 = 3.44$, $p = .49$. ANOVA: $F_{2,965} = .03, p = .97$.
- Self-reported frequency of church attendance, four ordinal categories. $\chi^2_6 = 16.3$, $p = .012$. ANOVA: $F_{2,972} = .21, p = .812$.

	# Items Agreed With							
	0	1	2	3	4	Mean	*n*	Std.Err
Treatment 2:								
Adding Believe in God	9	8	15	52	16	2.59	345	0.061
Treatment 1:								
Adding Not Believe in God	5	16	55	19	5	2.02	318	0.048
Control Group	12	20	52	16		1.72	325	0.048

Table 1: Cell entries are row percentages (may not sum to 100 due to rounding). Stanford University component of CCES 2006 (weighted data).

	# Items Agreed With							
	0	1	2	3	4	Mean	*n*	Std.Err
Treatment 2:								
Adding Believe in God	7	9	14	52	19	2.66	306	0.062
Treatment 1:								
Adding Not Believe in God	4	17	49	25	5	2.10	363	0.046
Control Group	11	18	49	22		1.83	318	0.051

Table 2: Cell entries are row percentages (may not sum to 100 due to rounding). Polimetrix "in-house" component of CCES 2006 (weighted data).

Estimates of Population Proportions

	Stanford	PMX
Atheists	.30	.27
	[.17, .43]	[.14, .41]
Theists	.87	.83
	[.71, 1.02]	[.67, .99]
Total	1.17	1.10
	[.97, 1.38]	[.89, 1.31]
Pr(Total$>$1)	.96	.83

Stratification

	Atheist Rate	
	Stanford	PMX
Low Education	.17 (.11)	.27 (.11)
Medium Education	.33 (.09)	.20 (.09)
High Education	.61 (.23)	.80 (.25)

Stratification

	Atheist Rate	
	Stanford	PMX
Liberal	.23 (.16)	.24 (.16)
Moderate	.41 (.10)	.29 (.10)
Conservative	.17 (.10)	.36 (.11)

Stratification

	Atheist Rate	
	Stanford	PMX
Non-South	.29 (.08)	.23 (.09)
South	.32 (.12)	.33 (.11)

Stratification

	Atheist Rate	
	Stanford	PMX
< $40K	.002 (.12)	.11 (.14)
$40K-$100K	.35 (.11)	.39 (.10)
> $100K	.46 (.18)	.39 (.17)

Stratification

	Atheist Rate	
Self-reported church attendance	Stanford	PMX
Once a week or more	.15 (.10)	.05 (.11)
A few times a month	.21 (.22)	.41 (.20)
Less than once a month	.08 (.15)	.18 (.15)
Almost never or never	.49 (.11)	.37 (.11)

Future

- Better baseline calibration: ask “innocuous” items one-by-one in the control group.
- Can then relate to covariates, generate predicted probabilities by covariate class in treated groups.
- Can then estimate predicted probability of assent to “sensitive” proposition for each treated subject. See Corstange (2006).

Conclusion

- Twice as many atheists as you might think...?
- Need further work to replicate/validate/ elaborate the finding.