

Appendix table 7-1

Primary source of information about current news events, by respondent characteristic: 2006

(Percent)

Characteristic	Newspaper	Magazine	Internet	Book/other print	Television	Radio	Government agency	Family	Friend/colleague	Other	Don't know
All adults (n = 1,864).....	23	1	14	—	49	6	—	2	2	1	—
Sex											
Male (n = 804).....	23	1	17	1	46	8	—	1	2	1	—
Female (n = 1,060).....	24	1	12	—	52	5	—	2	2	—	1
Formal education											
<High school (n = 227).....	20	1	2	0	68	3	0	5	—	—	2
High school graduate (n = 1,115).....	23	1	12	—	52	6	0	2	3	1	—
Baccalaureate (n = 346).....	22	1	25	1	37	9	1	2	—	—	0
Graduate/professional degree (n = 176).....	34	2	22	1	32	6	0	—	1	1	0
Science/mathematics education ^a											
Low (n = 1,042).....	25	1	8	1	55	5	0	3	2	1	1
Middle (n = 359).....	19	1	21	—	46	9	1	1	2	1	0
High (n = 408).....	26	1	24	1	35	10	—	1	2	1	0
Family income (quartile)											
Top (n = 311).....	27	1	15	0	44	9	1	1	1	1	0
Second (n = 420).....	21	1	18	1	45	8	0	4	2	—	0
Third (n = 419).....	24	2	10	—	53	5	1	2	2	1	—
Bottom (n = 462).....	21	1	12	1	56	5	0	1	2	1	—
Age (years)											
18–24 (n = 157).....	13	0	24	0	49	4	0	1	7	2	0
25–34 (n = 341).....	13	1	28	1	39	10	1	2	4	—	—
35–44 (n = 382).....	21	2	14	—	50	7	0	3	2	1	1
45–54 (n = 386).....	28	2	9	1	51	6	—	1	1	—	—
55–64 (n = 272).....	24	0	8	0	59	6	0	3	—	1	1
65+ (n = 321).....	42	1	3	—	50	3	0	1	—	—	1
Minor children at home											
Yes (n = 588).....	22	1	11	—	50	8	1	2	3	1	1
No (n = 1,276).....	24	1	15	1	49	6	0	2	2	1	—

— = ≤0.5% responded

^aLow = ≤5 high school and college science/math courses; middle = 6–8 courses; high = ≥9 courses.

NOTES: Responses to: *We are interested in how people get information about events in the news. Where do you get **most** of your information about current news events?* Detail may not add to total because of rounding.

SOURCE: University of Chicago, National Opinion Research Center, General Social Survey (2006).

Appendix table 7-2

Primary source of information about science and technology, by respondent characteristic: 2006

(Percent)

Characteristic	Newspaper	Magazine	Internet	Book/other print	Television	Radio	Government agency	Family	Friend/colleague	Other	Don't know
All adults (<i>n</i> = 1,864)	11	10	23	7	39	2	—	2	2	2	1
Sex											
Male (<i>n</i> = 804)	9	11	26	8	39	2	—	1	1	2	1
Female (<i>n</i> = 1,060).....	12	10	22	6	40	2	—	2	2	2	1
Formal education											
<High school (<i>n</i> = 227)	10	4	5	9	63	2	0	2	1	1	3
High school graduate (<i>n</i> = 1,115)	11	10	21	7	42	2	—	2	2	2	1
Baccalaureate (<i>n</i> = 346).....	10	12	39	5	25	4	1	3	2	1	—
Graduate/professional degree (<i>n</i> = 176)	15	19	29	10	22	2	0	1	0	1	1
Science/mathematics education ^a											
Low (<i>n</i> = 1,042)	11	10	14	7	49	1	—	2	2	2	2
Middle (<i>n</i> = 359)	12	10	33	7	29	3	—	2	—	3	0
High (<i>n</i> = 408).....	9	13	38	9	23	4	—	1	2	2	0
Family income (quartile)											
Top (<i>n</i> = 311)	15	17	26	5	26	4	—	4	1	2	—
Second (<i>n</i> = 420)	10	8	28	8	39	2	—	2	2	1	—
Third (<i>n</i> = 419).....	10	12	20	8	45	1	0	1	1	1	—
Bottom (<i>n</i> = 462).....	9	6	20	7	48	1	—	1	3	4	1
Age (years)											
18–24 (<i>n</i> = 157).....	4	4	36	11	28	2	0	4	4	7	0
25–34 (<i>n</i> = 341).....	5	7	36	5	37	4	—	—	3	1	1
35–44 (<i>n</i> = 382).....	11	13	25	5	37	2	—	2	1	1	1
45–54 (<i>n</i> = 386).....	12	9	21	7	42	2	—	2	1	2	1
55–64 (<i>n</i> = 272).....	13	16	15	8	43	—	1	1	1	1	1
65+ (<i>n</i> = 321)	20	12	7	9	46	—	0	2	—	1	3
Minor children at home											
Yes (<i>n</i> = 588).....	11	11	22	6	38	3	1	2	2	2	2
No (<i>n</i> = 1,276).....	11	10	24	8	40	2	—	2	1	2	1

— = ≤0.5% responded

^aLow = ≤5 high school and college science/math courses; middle = 6–8 courses; high = ≥9 courses.NOTES: Responses to: *We are interested in how people get information about science and technology. Where do you get **most** of your information about science and technology?* Detail may not add to total because of rounding.

SOURCE: University of Chicago, National Opinion Research Center, General Social Survey (2006).

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Appendix table 7-3

Primary source of information about specific scientific issues, by respondent characteristic: 2006

(Percent)

Characteristic	Newspaper	Magazine	Internet	Book/other print	Television	Radio	Government agency	Family	Friend/colleague	Other	Don't know
All adults (n = 1,864)	6	6	53	9	19	1	—	1	1	2	2
Sex											
Male (n = 804)	6	7	53	7	20	1	—	1	1	2	2
Female (n = 1,060).....	7	5	53	10	18	1	—	2	1	1	2
Formal education											
<High school (n = 227)	4	—	29	14	37	2	0	4	1	2	6
High school graduate (n = 1,115)	7	6	52	9	21	1	—	1	1	2	2
Baccalaureate (n = 346).....	5	8	65	6	10	2	0	2	1	—	1
Graduate/professional degree (n = 176)	10	11	64	9	3	0	0	0	1	2	0
Science/mathematics education ^a											
Low (n = 1,042)	7	5	44	10	26	1	—	1	1	2	3
Middle (n = 359)	6	7	60	8	12	2	—	2	1	1	1
High (n = 408).....	4	8	70	7	6	1	—	—	1	2	0
Family income (quartile)											
Top (n = 311)	7	8	61	8	11	2	0	1	1	2	0
Second (n = 420)	6	6	62	5	16	1	0	1	1	1	1
Third (n = 419).....	4	5	51	15	19	—	—	2	1	1	0
Bottom (n = 462).....	9	5	34	11	32	2	—	1	2	3	2
Age (years)											
18–24 (n = 157).....	2	2	72	7	8	0	—	4	2	2	1
25–34 (n = 341).....	3	5	65	5	16	3	—	—	1	1	2
35–44 (n = 382).....	7	8	55	5	19	1	—	1	0	2	2
45–54 (n = 386).....	7	5	56	8	20	1	0	1	1	1	1
55–64 (n = 272).....	6	7	45	14	22	—	—	2	1	2	2
65+ (n = 321)	13	8	23	16	28	2	0	2	1	3	5
Minor children at home											
Yes (n = 588).....	5	7	58	5	17	1	—	2	1	2	2
No (n = 1,276).....	7	5	50	11	20	1	0	1	1	2	2

— = ≤0.5% responded

^aLow = ≤5 high school and college science/math courses; middle = 6–8 courses; high = ≥9 courses.

NOTES: Responses to: *If you wanted to learn about scientific issues such as global warming or biotechnology, where would you get information?* Detail may not add to total because of rounding.

SOURCE: University of Chicago, National Opinion Research Center, General Social Survey (2006).

Appendix table 7-4

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Correct answers to scientific terms and concept questions, by three factual knowledge-of-science scales and respondent characteristic: 1995–2006

(Percent)

Characteristic	1995 (n = 2,006)	1997 (n = 2,000)	1999 (n = 1,882)	2001 (n = 1,574)	2004 (n = 2,025)	2006 (n = 1,864)
Knowledge scale 1						
All adults	56	56	57	60	NA ^a	59
Sex						
Male.....	61	62	62	65	NA ^a	65
Female.....	51	50	53	55	NA ^a	55
Formal education						
<High school.....	41	41	42	43	NA ^a	40
High school graduate	55	56	57	58	NA ^a	57
Baccalaureate	63	70	73	76	NA ^a	70
Graduate/professional	73	76	78	78	NA ^a	78
Science/mathematics education ^b						
Low.....	47	47	48	50	NA ^a	51
Middle.....	62	59	64	65	NA ^a	64
High	76	77	77	79	NA ^a	77
Family income (quartile)						
Top	NA	NA	NA	NA	NA ^a	67
Second	NA	NA	NA	NA	NA ^a	64
Third	NA	NA	NA	NA	NA ^a	59
Bottom	NA	NA	NA	NA	NA ^a	52
Age (years)						
18–24	60	59	62	61	NA ^a	63
25–34	61	59	60	64	NA ^a	59
35–44	59	61	61	63	NA ^a	62
45–54	57	57	59	64	NA ^a	62
55–64	48	52	53	57	NA ^a	60
65+.....	45	43	44	48	NA ^a	49
Minor children at home						
Yes.....	59	57	57	61	NA ^a	59
No.....	54	55	57	59	NA ^a	60
Knowledge scale 2						
All adults	57	57	58	61	58	60
Sex						
Male.....	62	62	63	65	63	64
Female.....	52	52	54	56	54	56
Formal education						
<High school.....	42	42	44	44	40	41
High school graduate	56	56	58	59	55	58
Baccalaureate	64	71	73	76	68	70
Graduate/professional	73	77	78	79	75	77
Science/mathematics education ^b						
Low.....	48	48	49	51	48	52
Middle.....	62	59	64	66	63	64
High	76	78	77	79	74	77
Family income (quartile)						
Top	NA	NA	NA	NA	68	68
Second	NA	NA	NA	NA	61	64
Third	NA	NA	NA	NA	55	59
Bottom	NA	NA	NA	NA	49	53
Age (years)						
18–24	60	58	62	62	63	62
25–34	61	60	61	64	61	59
35–44	59	62	62	64	62	62
45–54	59	58	60	64	60	63
55–64	50	54	55	58	57	61
65+.....	47	44	47	50	47	50
Minor children at home						
Yes.....	59	58	58	62	60	59
No.....	55	56	58	60	56	60

Appendix table 7-4

Correct answers to scientific terms and concept questions, by three factual knowledge-of-science scales and respondent characteristic: 1995–2006

(Percent)

Characteristic	1995 (n = 2,006)	1997 (n = 2,000)	1999 (n = 1,882)	2001 (n = 1,574)	2004 (n = 2,025)	2006 (n = 1,864)
Knowledge scale 3						
All adults	53	53	56	58	56	NA ^c
Sex						
Male.....	58	59	60	63	61	NA ^c
Female.....	49	49	51	54	52	NA ^c
Formal education						
<High school.....	39	39	41	41	37	NA ^c
High school graduate	52	53	55	56	53	NA ^c
Baccalaureate.....	61	69	71	74	66	NA ^c
Graduate/professional	71	74	77	77	73	NA
Science/mathematics education^b						
Low.....	45	45	46	48	46	NA ^c
Middle.....	59	56	61	64	61	NA ^c
High.....	74	76	76	78	72	NA ^c
Family income (quartile)						
Top	NA	NA	NA	NA	66	NA ^c
Second	NA	NA	NA	NA	59	NA ^c
Third	NA	NA	NA	NA	52	NA ^c
Bottom	NA	NA	NA	NA	46	NA ^c
Age (years)						
18–24.....	57	56	59	60	62	NA ^c
25–34.....	58	57	59	62	60	NA ^c
35–44.....	56	58	59	61	60	NA ^c
45–54.....	56	55	57	62	57	NA ^c
55–64.....	46	50	52	55	54	NA ^c
65+.....	43	41	43	47	44	NA ^c
Minor children at home						
Yes.....	56	55	56	60	58	NA ^c
No.....	52	53	55	57	54	NA ^c

NA = not available

^aNot all questions for knowledge scale 1 asked in 2004.

^bLow = ≤5 high school and college science/math courses; middle = 6–8 courses; high = ≥9 courses.

^cNot all questions for knowledge scale 3 asked in 2006.

NOTES: Table includes all years for which data collected. Factual knowledge of science scales 1, 2, and 3 include responses to:

- *The center of the Earth is very hot.* (True)
- *All radioactivity is man-made.* (False)
- *It is the father's gene that decides whether the baby is a boy or a girl.* (True)
- *Lasers work by focusing sound waves.* (False)
- *Electrons are smaller than atoms.* (True)
- *Antibiotics kill viruses as well as bacteria.* (False)
- *The universe began with a huge explosion.* (True)
- *The continents on which we live have been moving their location for millions of years and will continue to move in the future.* (True)
- *Human beings, as we know them today, developed from earlier species of animals.* (True)
- *Does the Earth go around the Sun, or does the Sun go around the Earth?* (Earth around Sun)

Knowledge scale 1 also includes responses to: *How long does it take for the Earth to go around the sun?* (One year); asked only if respondent answered correctly that Earth goes around Sun.

Knowledge scale 3 also includes responses to a question on meaning of DNA. Knowledge scale 2 does not include either of these two questions.

SOURCES: National Science Foundation, Division of Science Resources Statistics, Survey of Public Attitudes Toward and Understanding of Science and Technology (1995–2001); University of Michigan, Survey of Consumer Attitudes (2004); and University of Chicago, National Opinion Research Center, General Social Survey (2006).

Appendix table 7-5

Correct answers to scientific literacy questions: 1985–2006

(Percent)

Question	1985 (n = 2,003)	1988 (n = 2,041)	1990 (n = 2,005)	1992 (n = 1,995)	1995 (n = 2,006)	1997 (n = 2,000)	1999 (n = 1,882)	2001 (n = 1,574)	2004 (n = 2,025)	2006 (n = 1,864)
<i>The center of the Earth is very hot. (True)</i>	NA	80	79	81	78	82	80	80	78	80
<i>All radioactivity is man-made. (False)</i>	NA	65	63	73	72	71	71	76	73	70
<i>Lasers work by focusing sound waves. (False)</i>	NA	36	37	37	40	39	43	45	42	45
<i>Electrons are smaller than atoms. (True)</i>	NA	43	41	46	44	43	46	48	45	53
<i>The universe began with a huge explosion. (True)</i>	NA	54	32	38	35	32	33	33	33 ^a	33
<i>The continents on which we live have been moving their location for millions of years and will continue to move in the future. (True)</i>	79	80	77	79	78	78	80	79	77	80
<i>Does the Earth go around the Sun, or does the Sun go around the Earth? (Earth around Sun)</i>	NA	73	73	71	73	73	72	75	71	76
<i>How long does it take for the Earth to go around the Sun? (One year)</i>	NA	45	48	46	47	48	49	54	NA	55
<i>It is the father's gene that decides whether the baby is a boy or a girl. (True)</i>	NA	NA	NA	65	64	62	66	65	62	64
<i>Antibiotics kill viruses as well as bacteria. (False)</i>	NA	26	30	35	40	43	45	51	54	56
<i>Human beings, as we know them today, developed from earlier species of animals. (True)</i>	45	46	45	45	44	44	45	53	42 ^a	43

NA = not available, question not asked

^aQuestion asked of 1,558 survey respondents.

NOTE: Table includes all years for which data collected.

SOURCES: National Science Foundation, Division of Science Resources Statistics, Survey of Public Attitudes Toward and Understanding of Science and Technology (1985–2001); University of Michigan, Survey of Consumer Attitudes (2004); and University of Chicago, National Opinion Research Center, General Social Survey (2006).

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Appendix table 7-6
Correct answers to scientific literacy questions, by respondent characteristic: 2006
 (Percent)

Characteristic	<i>The center of the Earth is very hot.</i> (True)	<i>All radioactivity is man-made.</i> (False)	<i>Lasers work by focusing sound waves.</i> (False)	<i>Electrons are smaller than atoms.</i> (True)	<i>The universe began with a huge explosion.</i> (True)	<i>The continents on which we live have been moving their location for millions of years and will continue to move in the future.</i> (True)	<i>Does the Earth go around the Sun, or does the Sun go around the Earth? (Earth around Sun)</i>	<i>How long does it take for the Earth to go around the Sun: one day, one month, or one year? (One year)</i>	<i>It is the father's gene that decides whether the baby is a boy or a girl.</i> (True)	<i>Antibiotics kill viruses as well as bacteria.</i> (False)	<i>Human beings, as we know them today, developed from earlier species of animals.</i> (True)
All adults (n = 1,864).....	80	70	45	53	33	80	76	55	64	56	43
Sex											
Male.....	85	77	62	61	40	85	82	66	55	50	47
Female.....	75	64	32	48	27	75	71	46	72	61	40
Formal education											
<High school (n = 227).....	64	42	21	36	22	68	51	33	53	24	26
High school graduate (n = 1,115).....	80	69	44	49	28	77	74	52	63	53	38
Baccalaureate (n = 346).....	81	77	54	69	44	89	86	67	69	73	57
Graduate/professional (n = 176).....	92	91	64	74	53	93	92	79	72	77	66
Science/mathematics education ^a											
Low (n = 1,042).....	76	62	37	42	26	74	68	43	59	45	36
Middle (n = 359).....	85	76	47	59	38	81	81	64	66	61	48
High (n = 408).....	87	85	65	80	46	94	93	81	77	80	59
Family income (quartile)											
Top (n = 311).....	85	79	54	58	41	88	80	61	68	69	55
Second (n = 420).....	83	77	48	59	35	82	83	60	66	63	46
Third (n = 419).....	82	72	46	53	28	81	75	57	66	50	40
Bottom (n = 462).....	72	61	37	45	30	76	65	44	57	44	38
Age (years)											
18–24 (n = 157).....	85	66	49	61	28	90	83	71	58	51	53
25–34 (n = 341).....	83	65	42	57	31	79	74	59	65	53	45
35–44 (n = 382).....	82	68	50	54	35	80	80	58	69	60	45
45–54 (n = 386).....	80	78	46	56	35	82	80	58	67	62	43
55–64 (n = 272).....	75	72	50	54	36	82	73	48	66	59	42
65+ (n = 321).....	71	67	32	37	30	68	63	37	55	48	33
Minor children at home											
Yes (n = 588).....	81	65	45	52	31	77	78	58	68	57	41
No (n = 1,276).....	79	72	45	54	34	81	74	53	63	56	44

^aLow = ≤5 high school and college science/math courses; middle = 6–8 courses; high = ≥9 courses.

SOURCE: University of Chicago, National Opinion Research Center, General Social Survey (2006).

Appendix table 7-7

Correct answers to polar and nanotechnology questions, by respondent characteristic: 2006

(Percent)

Characteristic	Polar					Nanotechnology ^a	
	<i>The North Pole is on a sheet of ice that floats on the Arctic Ocean.</i> (True)	<i>The sun never shines at the South Pole.</i> (False)	<i>Hunting is more likely than climate change to make polar bears become extinct.</i> (False)	<i>Have the polar ice caps gotten larger or smaller over the last 25 years?</i> (Smaller)	<i>Inuit (often called Eskimos) live north of the Arctic Circle.</i> (False)	<i>Nanotechnology involves manipulating extremely small units of matter, such as individual atoms, in order to produce better materials.</i> (True)	<i>The properties of nanoscale materials often differ fundamentally and unexpectedly from the properties of the same materials at larger scales.</i> (True)
All adults (n = 1,864).....	41	67	36	77	18	57	39
Sex							
Male (n = 804).....	52	75	40	86	18	64	45
Female (n = 1,060).....	33	61	32	71	18	48	33
Formal education							
<High school (n = 227).....	39	50	19	60	9	42	21
High school graduate (n = 1,115) ..	38	64	37	76	18	51	32
Baccalaureate (n = 346).....	47	78	38	84	20	67	48
Graduate/professional (n = 176).....	52	85	45	91	27	66	57
Science/mathematics education ^b							
Low (n = 1,042).....	36	61	33	70	14	48	25
Middle (n = 359).....	42	73	36	86	23	54	39
High (n = 408).....	54	80	43	90	24	70	54
Family income (quartile)							
Top (n = 311).....	47	78	40	89	23	56	40
Second (n = 420).....	43	68	43	81	18	66	40
Third (n = 419).....	41	67	34	79	15	57	39
Bottom (n = 462).....	41	59	29	68	18	52	41
Age (years)							
18–24 (n = 157).....	48	66	37	83	26	48	35
25–34 (n = 341).....	45	72	33	73	17	56	47
35–44 (n = 382).....	38	68	37	75	17	59	43
45–54 (n = 386).....	39	69	37	79	17	56	31
55–64 (n = 272).....	45	63	36	83	19	62	42
65+ (n = 321).....	35	60	34	75	14	61	38
Minor children at home							
Yes (n = 588).....	39	65	34	71	17	55	37
No (n = 1,276).....	43	68	37	80	18	58	41
Factual knowledge of science ^c (quartile)							
Top (n = 455).....	61	91	48	95	28	72	52
Second (n = 470).....	40	72	42	85	22	51	34
Third (n = 479).....	40	60	30	78	14	39	26
Bottom (n = 460).....	22	43	20	48	7	31	14

^aNanotechnology questions asked only of 822 survey respondents who reported they had heard of nanotechnology.^bLow = ≤5 high school and college science/math courses; middle = 6–8 courses; high = ≥9 courses.^cSee notes to appendix table 7-4 for explanation of “factual knowledge of science scale 1.”

SOURCE: University of Chicago, National Opinion Research Center, General Social Survey (2006).

Appendix table 7-8

Correct answers to scientific literacy questions in Europe: 1992 and 2005

(Mean percent)

Country	1992	2005
Belgium.....	47	60
Denmark.....	60	66
Germany.....	50	60
Greece.....	42	47
Spain.....	45	51
France.....	54	61
Ireland.....	45	55
Italy.....	50	56
Luxembourg.....	49	66
Netherlands.....	56	67
Portugal.....	40	45
United Kingdom.....	55	61

NOTES: Mean percent based on correct responses to four factual science questions: (1) *The oxygen we breathe comes from plants* (True); (2) *Electrons are smaller than atoms* (True); (3) *Antibiotics kill viruses as well as bacteria* (False); (4) *All radioactivity is man-made* (False). Data for 1992 derived by subtracting reported variation between averages for 1992 and 2005 from reported average for 2005; this may have resulted in small rounding errors for 1992.

SOURCE: European Commission, Research Directorate-General, Eurobarometer 224/Wave 63.1 (3 January–15 February 2005); Europeans, Science and Technology (2005).

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Appendix table 7-9

Correct answers to scientific process questions: 1988–2006

(Percent)

Question	1988 (n = 2,041)	1990 (n = 2,005)	1992 (n = 1,995)	1995 (n = 2,006)	1997 (n = 2,000)	1999 (n = 1,882)	2001 (n = 1,574)	2004 (n = 2,025)	2006 (n = 1,864)
Understanding of probability ^a	64	61	64	63	62	64	67	64	69
If the first three children are healthy, the fourth child will have illness.	84	78	80	77	78	78	78	NA	NA
If the first child has illness, the next three will not.	86	81	83	81	81	82	84	82	86
Each of the couple's children will have the same risk of illness.	72	70	71	72	71	74	75	73	75
If the couple has only three children, none will have illness.	87	81	83	79	79	81	84	NA	NA
Understanding of scientific study ^b	17	18	21	16	23	21	26	23	25
Understanding of experiment ^c	NA	NA	NA	26	36	34	38	46	42
Understanding of scientific inquiry ^d	NA	NA	NA	26	34	32	39	39	41

NA = not available, question not asked

^aTo be classified as understanding probability, survey respondent had to answer correctly: *A doctor tells a couple that their genetic makeup means that they've got one in four chances of having a child with an inherited illness. (1) Does this mean that if their first child has the illness, the next three will not? and (2) Does this mean that each of the couple's children will have the same risk of suffering from the illness?*

^bTo be classified as understanding scientific study, survey respondent had to answer: (1) *When you read news stories, you see certain sets of words and terms. We are interested in how many people recognize certain kinds of terms. First, some articles refer to the results of a scientific study. When you read or hear the term scientific study, do you have a clear understanding of what it means, a general sense of what it means, or little understanding of what it means?* and (2) (If "clear understanding" or "general sense" response) *In your own words, could you tell me what it means to study something scientifically?*

^cTo be classified as understanding experiment, survey respondent had to answer correctly: (1) *Two scientists want to know if a certain drug is effective against high blood pressure. The first scientist wants to give the drug to 1,000 people with high blood pressure and see how many of them experience lower blood pressure levels. The second scientist wants to give the drug to 500 people with high blood pressure and not give the drug to another 500 people with high blood pressure, and see how many in both groups experience lower blood pressure levels. Which is the better way to test this drug?* and (2) *Why is it better to test the drug this way?*

^dTo be classified as understanding scientific inquiry, survey respondent had to: (1) answer correctly the two probability questions stated in footnote b and (2) either provide "theory-testing" response to open-ended question about what it means to study something scientifically or correct response to open-ended question about experiment, i.e., explain why it is better to test a drug using a control group.

NOTE: Table includes all years for which data collected.

SOURCES: National Science Foundation, Division of Science Resources Statistics, Survey of Public Attitudes Toward and Understanding of Science and Technology (1988–2001); University of Michigan, Survey of Consumer Attitudes (2004); and University of Chicago, National Opinion Research Center, General Social Survey (2006).

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Appendix table 7-10

Correct answers to scientific process questions, by respondent characteristic: 2006

(Percent)

Characteristic	Probability	Scientific study	Experiment	Scientific inquiry
All adults (n = 1,864)	69	25	42	41
Sex				
Male (n = 804)	72	24	42	42
Female (n = 1,060).....	68	26	41	40
Formal education				
<High school (n = 227)	49	5	21	16
High school graduate (n = 1,115)	69	21	39	38
Baccalaureate (n = 346).....	75	39	53	54
Graduate/professional degree (n = 176)	82	51	59	63
Science/mathematics education ^a				
Low (n = 1,042)	63	13	33	30
Middle (n = 359)	76	33	47	48
High (n = 408)	83	50	60	65
Family income (quartile)				
Top (n = 311)	77	41	51	53
Second (n = 420)	75	28	46	45
Third (n = 419).....	74	18	41	40
Bottom (n = 462).....	63	17	36	33
Age (years)				
18–24 (n = 157).....	76	33	49	49
25–34 (n = 341).....	68	28	49	44
35–44 (n = 382).....	72	28	44	47
45–54 (n = 386).....	75	27	39	42
55–64 (n = 272).....	67	25	36	35
65+ (n = 321)	58	11	31	26
Minor children at home				
Yes (n = 588).....	69	24	44	44
No (n = 1,276).....	70	26	40	39
Factual knowledge of science ^b (quartile)				
Top (n = 455)	88	52	68	72
Second (n = 470)	71	27	41	41
Third (n = 479).....	69	15	34	32
Bottom (n = 460).....	47	5	22	16

^aLow = ≤5 high school and college science/math courses; middle = 6–8 courses; high = ≥9 courses.^bSee notes to appendix table 7-4 for explanation of "factual knowledge of science scale 1."

NOTE: See footnotes to appendix table 7-9 for explanation of understanding of probability, scientific study, experiment, and scientific inquiry.

SOURCE: University of Chicago, National Opinion Research Center, General Social Survey (2006).

Public assessment of astrology, by respondent characteristic: 1979–2006

(Percent)

Characteristic	1979 (n = 1,635)	1983 (n = 1,631)	1985 (n = 2,003)	1988 (n = 2,041)	1990 (n = 2,005)	1992 (n = 1,995)	1995 (n = 2,006)	1997 (n = 2,000)	1999 (n = 1,882)	2001 (n = 1,574)	2004 (n = 2,025)	2006 (n = 1,864)
All adults												
Very scientific.....	8	10	8	6	6	7	7	7	7	9	6	5
Sort of scientific.....	34	35	31	31	29	29	28	29	29	31	26	26
Not at all scientific.....	50	51	57	60	60	62	60	59	59	56	66	65
Don't know.....	9	4	4	3	5	3	5	5	5	4	2	4
Sex												
Male												
Very scientific.....	7	9	7	5	5	6	7	7	7	9	5	5
Sort of scientific.....	30	29	29	25	23	25	24	27	25	27	21	23
Not at all scientific.....	54	58	60	67	67	66	65	63	63	60	72	68
Don't know.....	9	4	3	3	5	2	4	2	5	4	2	4
Female												
Very scientific.....	8	10	9	7	6	7	7	7	7	8	6	5
Sort of scientific.....	37	41	32	36	35	32	32	31	32	36	30	29
Not at all scientific.....	46	44	55	53	55	58	56	55	56	52	61	63
Don't know.....	9	5	4	3	5	3	6	7	5	4	3	4
Formal education												
<High school												
Very scientific.....	11	13	14	11	7	12	11	11	13	14	10	10
Sort of scientific.....	34	37	38	35	31	34	30	37	34	35	38	41
Not at all scientific.....	39	40	43	50	49	49	46	42	41	45	50	42
Don't know.....	16	10	5	4	12	5	13	10	13	6	2	8
High school graduate												
Very scientific.....	7	10	8	6	6	6	8	7	7	9	7	5
Sort of scientific.....	37	38	29	32	32	31	28	30	30	35	29	29
Not at all scientific.....	50	50	60	59	61	61	61	60	60	52	62	62
Don't know.....	6	2	3	3	2	2	3	4	3	4	2	4
Baccalaureate												
Very scientific.....	1	3	4	2	4	3	6	2	2	4	2	2
Sort of scientific.....	23	26	25	24	19	19	34	21	20	25	17	16
Not at all scientific.....	67	69	68	72	75	76	60	75	76	69	80	78
Don't know.....	9	3	3	1	2	3	—	2	3	2	1	4
Graduate/professional degree												
Very scientific.....	5	5	1	—	1	3	2	4	2	3	—	—
Sort of scientific.....	15	23	23	19	17	14	22	15	19	13	16	12
Not at all scientific.....	76	69	74	78	80	82	74	78	77	83	83	84
Don't know.....	4	3	2	2	2	—	2	2	2	—	1	4

Appendix table 7-11

(Page 2 of 3)

Public assessment of astrology, by respondent characteristic: 1979–2006

(Percent)

Characteristic	1979 (n = 1,635)	1983 (n = 1,631)	1985 (n = 2,003)	1988 (n = 2,041)	1990 (n = 2,005)	1992 (n = 1,995)	1995 (n = 2,006)	1997 (n = 2,000)	1999 (n = 1,882)	2001 (n = 1,574)	2004 (n = 2,025)	2006 (n = 1,864)
Age (years)												
18–24												
Very scientific.....	9	13	10	10	5	14	9	11	7	17	10	5
Sort of scientific.....	40	43	39	36	37	37	33	38	40	39	36	34
Not at all scientific.....	47	42	51	54	56	49	53	50	50	42	52	56
Don't know.....	4	3	—	0	2	1	5	1	3	1	2	5
25–34												
Very scientific.....	7	7	6	6	6	4	9	6	5	10	6	8
Sort of scientific.....	36	39	32	32	32	33	30	32	30	33	33	28
Not at all scientific.....	52	51	60	60	61	62	59	59	61	54	60	60
Don't know.....	4	3	1	1	2	1	2	3	3	3	1	4
35–44												
Very scientific.....	6	11	8	6	5	7	4	4	7	7	4	5
Sort of scientific.....	37	32	29	31	26	27	32	26	32	32	24	28
Not at all scientific.....	53	54	61	60	68	64	61	66	59	58	69	65
Don't know.....	5	3	2	2	1	3	3	4	1	3	2	2
45–54												
Very scientific.....	8	7	5	4	7	6	4	4	5	5	4	3
Sort of scientific.....	28	40	32	26	25	27	26	28	23	27	18	24
Not at all scientific.....	54	50	59	66	64	63	67	65	67	66	74	70
Don't know.....	10	3	5	4	4	4	3	4	5	3	3	3
55–64												
Very scientific.....	10	8	11	5	5	3	8	7	10	6	6	3
Sort of scientific.....	32	33	24	33	25	18	20	17	27	27	25	24
Not at all scientific.....	44	56	56	56	59	77	66	69	58	62	66	68
Don't know.....	15	3	9	5	10	2	6	7	6	5	3	5
65+												
Very scientific.....	5	12	11	6	5	7	10	11	11	6	6	5
Sort of scientific.....	26	24	26	27	29	27	22	31	20	31	26	21
Not at all scientific.....	50	52	55	60	53	60	55	47	57	54	64	68
Don't know.....	19	12	8	6	13	6	12	11	13	9	3	7
Factual knowledge of science^a (quartile)												
Top												
Very scientific.....	NA	NA	NA	NA	NA	2	4	3	2	7	2	2
Sort of scientific.....	NA	NA	NA	NA	NA	22	20	22	24	24	17	14
Not at all scientific.....	NA	NA	NA	NA	NA	74	75	75	72	68	81	83
Don't know.....	NA	NA	NA	NA	NA	2	1	—	1	2	—	1

Public assessment of astrology, by respondent characteristic: 1979–2006

(Percent)

Characteristic	1979 (n = 1,635)	1983 (n = 1,631)	1985 (n = 2,003)	1988 (n = 2,041)	1990 (n = 2,005)	1992 (n = 1,995)	1995 (n = 2,006)	1997 (n = 2,000)	1999 (n = 1,882)	2001 (n = 1,574)	2004 (n = 2,025)	2006 (n = 1,864)
Second												
Very scientific.....	NA	NA	NA	NA	NA	7	6	6	6	9	4	5
Sort of scientific.....	NA	NA	NA	NA	NA	28	30	29	25	30	22	24
Not at all scientific.....	NA	NA	NA	NA	NA	63	63	62	67	58	73	67
Don't know.....	NA	NA	NA	NA	NA	2	1	2	2	2	1	4
Third												
Very scientific.....	NA	NA	NA	NA	NA	7	10	8	8	10	6	7
Sort of scientific.....	NA	NA	NA	NA	NA	33	29	31	34	36	31	34
Not at all scientific.....	NA	NA	NA	NA	NA	58	57	58	55	51	62	55
Don't know.....	NA	NA	NA	NA	NA	2	4	3	3	3	2	4
Bottom												
Very scientific.....	NA	NA	NA	NA	NA	9	8	9	11	11	10	5
Sort of scientific.....	NA	NA	NA	NA	NA	31	31	32	31	36	32	34
Not at all scientific.....	NA	NA	NA	NA	NA	55	50	46	45	44	51	54
Don't know.....	NA	NA	NA	NA	NA	5	12	12	13	10	7	8
Understanding of scientific inquiry^b												
Understands inquiry												
Very scientific.....	NA	NA	NA	NA	NA	NA	2	3	4	4	2	4
Sort of scientific.....	NA	NA	NA	NA	NA	NA	24	26	22	29	19	19
Not at all scientific.....	NA	NA	NA	NA	NA	NA	74	70	73	66	78	75
Don't know.....	NA	NA	NA	NA	NA	NA	1	1	2	1	1	2
Doesn't understand inquiry												
Very scientific.....	NA	NA	NA	NA	NA	NA	9	9	9	12	8	5
Sort of scientific.....	NA	NA	NA	NA	NA	NA	29	31	32	33	31	31
Not at all scientific.....	NA	NA	NA	NA	NA	NA	55	53	53	49	58	58
Don't know.....	NA	NA	NA	NA	NA	NA	6	7	7	6	3	5

— = ≤0.5% responded; NA = not available, question not asked

^aSee notes to appendix table 7-4 for explanation of "factual knowledge of science scale 1."^bSee notes to appendix table 7-9 for explanation of scientific inquiry.NOTES: Responses to: *Would you say that astrology is very scientific, sort of scientific, or not at all scientific?* Table includes all years for which data collected. Detail may not add to total because of rounding.

SOURCES: National Science Foundation, Division of Science Resources Statistics, Survey of Public Attitudes Toward and Understanding of Science and Technology (1979–2001); University of Michigan, Survey of Consumer Attitudes (2004); and University of Chicago, National Opinion Research Center, General Social Survey (2006).

Appendix table 7-12

Public assessment of benefits and harms of scientific research, by respondent characteristic: 2006

(Percent)

Characteristic	Benefits strongly outweigh harmful results	Benefits slightly outweigh harmful results	Benefits are about equal to harmful results	Harmful results slightly outweigh benefits	Harmful results strongly outweigh benefits	Don't know
All adults (n = 1,864)	48	22	17	4	2	6
Sex						
Male (n = 804)	51	21	15	4	3	5
Female (n = 1,060).....	46	23	19	4	1	7
Formal education						
<High school (n = 227)	27	20	28	8	3	13
High school graduate (n = 1,115)	45	24	17	5	2	6
Baccalaureate (n = 346).....	57	19	15	3	1	4
Graduate/professional degree (n = 176)	76	13	8	2	1	—
Science/mathematics education ^a						
Low (n = 1,042)	38	24	21	6	3	8
Middle (n = 359)	53	24	14	3	1	5
High (n = 408).....	70	15	11	2	1	2
Family income (quartile)						
Top (n = 311)	60	22	11	3	3	2
Second (n = 420)	53	23	16	3	1	5
Third (n = 419).....	46	25	20	5	1	3
Bottom (n = 462).....	41	22	19	6	3	8
Age (years)						
18–24 (n = 157).....	46	26	14	5	3	6
25–34 (n = 341).....	43	21	22	5	2	7
35–44 (n = 382).....	49	22	18	5	2	5
45–54 (n = 386).....	51	19	19	4	3	4
55–64 (n = 272).....	56	20	14	2	2	5
65+ (n = 321)	44	25	15	5	1	11
Minor children at home						
Yes (n = 588).....	47	22	19	4	3	6
No (n = 1,276).....	49	22	16	5	2	6
Factual knowledge of science ^b (quartile)						
Top (n = 455)	72	17	8	1	—	2
Second (n = 470)	51	22	17	5	2	3
Third (n = 479).....	41	25	18	6	3	7
Bottom (n = 460).....	28	23	27	5	3	14

— = ≤0.5% responded

^aLow = ≤5 high school and college science/math courses; middle = 6–8 courses; high = ≥9 courses.

^bSee notes to appendix table 7-4 for explanation of “factual knowledge of science scale 1.”

NOTES: Responses to: *People have frequently noted that scientific research has produced benefits and harmful results. Would you say that, on balance, the benefits of scientific research have outweighed the harmful results, or that the harmful results of scientific research have been greater than its benefits?* Detail may not add to total because of rounding.

SOURCE: University of Chicago, National Opinion Research Center, General Social Survey (2006).

Attitudes toward science and technology, by country/region: most recent year

(Percent)

Statement	United States (2004 or 2006) ^a						Japan (2001)						South Korea (2006)						Russia (1996 or 2003) ^b			
	Total agree	Strongly agree	Agree	Disagree	Strongly disagree	Don't know	Total agree	Strongly agree	Agree	Disagree	Strongly disagree	Don't know	Total agree	Strongly agree	Agree	Disagree	Strongly disagree	Don't know	Total agree	Agree	Disagree	Don't know
Promise of science																						
<i>Science and technology are making our lives healthier, easier, and more comfortable.....</i>	90	27	63	7	2	1	73	6	67	13	1	13	94	36	58	3	0	3	53	53	13	34
<i>With the application of science and new technology, work will become more interesting.</i>	76	13	63	19	2	2	54	4	50	25	2	20	85	27	59	9	1	5	NA	NA	NA	NA
<i>Because of science and technology, there will be more opportunities for the next generation.....</i>	90	41	49	8	1	2	66	6	60	16	1	18	86	34	52	8	1	5	NA	NA	NA	NA
Reservations about science																						
<i>We depend too much on science and not enough on faith.</i>	55	17	39	32	10	2	NA	NA	NA	NA	NA	NA	51	9	43	34	6	9	19	19	26	55
<i>It is not important for me to know about science in my daily life.....</i>	14	2	13	55	30	1	25	2	23	57	11	8	28	4	24	45	21	6	31	31	56	13
<i>Science makes our way of life change too fast.....</i>	44	10	34	45	8	3	62	8	54	24	1	13	79	25	54	14	3	5	30	30	48	22
Statement	China (2001)					India (2004)				Malaysia (2004) ^c				EU-25 (2005)								
	Total agree	Agree	Basically agree	Don't agree	Don't know	Total agree	Agree	Disagree	Don't know	Total agree	Agree	Disagree	Not sure	Total agree	Strongly agree	Tend to agree	Neither agree nor disagree	Tend to disagree	Strongly disagree	Don't know		
Promise of science																						
<i>Science and technology are making our lives healthier, easier, and more comfortable.....</i>	94	65	30	1	4	77	77	5	19	74	74	4	22	78	32	46	14	5	1	2		
<i>With the application of science and new technology, work will become more interesting.</i>	81	46	35	5	14	61	61	10	30	70	70	3	27	69	24	45	18	7	3	3		
<i>Because of science and technology, there will be more opportunities for the next generation.....</i>	78	45	32	6	16	54	54	12	35	NA	NA	NA	NA	77	35	42	12	6	2	2		
Reservations about science																						
<i>We depend too much on science and not enough on faith.</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	27	27	33	40	39	12	27	26	17	12	4		
<i>It is not important for me to know about science in my daily life.....</i>	17	6	12	74	9	NA	NA	NA	NA	2	2	76	22	37	14	23	16	26	19	1		
<i>Science makes our way of life change too fast.....</i>	73	37	35	16	11	75	75	7	18	66	66	6	28	59	21	38	18	15	5	2		

Appendix table 7-13

Attitudes toward science and technology, by country/region: most recent year

(Percent)

Statement	United States (2006)							Japan (2001)							South Korea (2006)						
	Total benefit	B>>H	B>H	B=H	H>B	H>>B	Don't know	Total benefit	B>>H	B>H	B=H	H>B	H>>B	Don't know	Total benefit	B>>H	B>H	B=H	H>B	H>>B	Don't know
Benefit (B) versus harm (H)																					
<i>Have the benefits of scientific research outweighed the harmful results?.....</i>																					
	70	48	22	17	4	2	6	40	13	27	28	15	6	11	71	33	39	22	2	0	4

Statement	Russia (1996 or 2003) ^a					China (2001)					Malaysia (2004)				EU-25 (2005)						
	Total benefit	B>H	B=H	H>B	Don't know	Total benefit	B>H	B=H	H>B	Unclear	Total benefit	B>H	H>B	Not sure	Total benefit	B>>H	B>H	B=H	H>B	H>>B	Don't know
Benefit (B) versus harm (H)																					
<i>Have the benefits of scientific research outweighed the harmful results?.....</i>																					
	59	59	30	5	6	76	76	7	0	17	69	69	6	25	52	16	36	29	10	3	5

NA = not available, question not asked or different response categories offered

EU = European Union; B>>H = benefits strongly outweigh harmful results; B>H = benefits slightly outweigh harmful results; B=H = benefits about equal harmful results; H>B = harmful results slightly outweigh benefits; H>>B = harmful results strongly outweigh benefits

^aU.S. responses for following items from 2004 survey: "Science and technology are making our lives healthier . . ."; "With the application of science and new technology . . ."; "We depend too much on science . . ."; and "It is not important for me to know . . ." Responses to the other items are from 2006 survey.

^bRussian responses for "Science and technology are making our lives healthier . . ." and "We depend too much on science . . ." are from 1996 survey. Responses for "Have the benefits . . ." and "Science makes our way of life change . . ." are from 2003 survey.

^cMalaysian question corresponding to "It is not important for me to know about science in my daily life" stated in a positive form as "We need to have knowledge about science in order to manage our daily lives." The Malaysian responses of agree and disagree have been reversed to make them correspond to negative form of statement asked by other countries and included in this table.

NOTES: "Benefit versus harm" data for United States, Japan, Korea, Russia, and EU-25 are responses to questions or statements that included words "benefit" and "harm." Russian response category "more benefits" is aggregate of "undoubtedly more benefits" and "probably more benefits"; Russian category "more harms" is aggregate of "undoubtedly more harms" and "probably more harms." EU-25 survey provided statement, "The benefits of science are greater than any harmful effects it may have," and asked respondent to indicate one of following response categories: strongly agree, tend to agree, neither agree nor disagree, tend to disagree, strongly disagree, don't know. Chinese survey asked respondents to indicate whether S&T brings about more "advantages" or more "disadvantages," whether advantages and disadvantages of S&T are about equal, or whether respondent was "unclear" about it. Malaysian survey asked respondents to indicate whether they agreed with, disagreed with, or weren't sure about statement, "Scientific research has more positive effects than negative effects."

SOURCES: United States—University of Michigan, Survey of Consumer Attitudes (2004) and University of Chicago, National Opinion Research Center, General Social Survey (2006); Japan—Government of Japan, National Institute of Science and Technology Policy, Ministry of Education, Culture, Sports, Science and Technology, The 2001 Survey of Public Attitudes Toward and Understanding of Science and Technology in Japan (2002); South Korea—Korea Science Foundation, Survey of Public Attitudes Toward and Understanding of Science and Technology (2006); Russia—Gokhberg L and Shuvalova O, Russian Public Opinion of the Knowledge Economy: Science, Innovation, Information Technology and Education as Drivers of Economic Growth and Quality of Life, British Council, Russia (2004); China—Chinese Ministry of Science and Technology, China Science and Technology Indicators 2002 (2002); India—National Council of Applied Economic Research, India Science Survey (2004); Malaysia—Malaysian Science and Technology Information Centre, Public Awareness of Science and Technology Malaysia 2004 (2005); and EU—European Commission, Research Directorate-General, Eurobarometer 224/Wave 63.1: Europeans, Science and Technology (2005).

Appendix table 7-14

Public assessment of whether science is too concerned with theory and speculation for use in government decisions, by respondent characteristic: 2006

(Percent)

Characteristic	Strongly agree	Agree	Disagree	Strongly disagree	Don't know
All adults (<i>n</i> = 1,864).....	6	29	48	10	8
Sex					
Male (<i>n</i> = 804).....	5	31	47	11	6
Female (<i>n</i> = 1,060).....	6	27	49	10	9
Formal education					
<High school (<i>n</i> = 227).....	9	37	40	3	12
High school graduate (<i>n</i> = 1,115).....	6	30	48	8	8
Baccalaureate (<i>n</i> = 346).....	3	25	50	15	7
Graduate/professional degree (<i>n</i> = 176).....	3	17	51	27	2
Science/mathematics education ^a					
Low (<i>n</i> = 1,042).....	7	33	45	6	9
Middle (<i>n</i> = 359).....	3	29	49	12	6
High (<i>n</i> = 408).....	4	18	56	20	2
Family income (quartile)					
Top (<i>n</i> = 311).....	3	25	53	15	3
Second (<i>n</i> = 420).....	5	28	52	9	6
Third (<i>n</i> = 419).....	7	32	49	7	5
Bottom (<i>n</i> = 462).....	6	32	41	12	8
Age (years)					
18–24 (<i>n</i> = 157).....	3	21	59	10	8
25–34 (<i>n</i> = 341).....	7	31	46	10	7
35–44 (<i>n</i> = 382).....	5	27	53	9	6
45–54 (<i>n</i> = 386).....	6	27	49	13	5
55–64 (<i>n</i> = 272).....	5	31	39	13	12
65+ (<i>n</i> = 321).....	6	34	43	7	11
Minor children at home					
Yes (<i>n</i> = 588).....	5	29	49	9	7
No (<i>n</i> = 1,276).....	6	28	47	11	8
Factual knowledge of science ^b (quartile)					
Top (<i>n</i> = 455).....	3	17	56	22	2
Second (<i>n</i> = 470).....	4	29	53	10	5
Third (<i>n</i> = 479).....	9	33	47	5	6
Bottom (<i>n</i> = 460).....	7	37	33	4	19

^aLow = ≤5 high school and college science/math courses; middle = 6–8 courses; high = ≥9 courses.^bSee notes to appendix table 7-4 for explanation of “factual knowledge of science scale 1.”NOTES: Responses to: *Science is too concerned with theory and speculation to be of much use in making concrete government policy decisions that will affect the way we live.*
Detail may not add to total because of rounding.

SOURCE: University of Chicago, National Opinion Research Center, General Social Survey (2006).

Appendix table 7-15

Public assessment of whether science makes life change too fast, by respondent characteristic: 2006

(Percent)

Characteristic	Strongly agree	Agree	Disagree	Strongly disagree	Don't know
All adults (<i>n</i> = 1,864)	10	34	45	8	3
Sex					
Male (<i>n</i> = 804)	10	36	43	9	2
Female (<i>n</i> = 1,060)	10	33	46	8	3
Formal education					
<High school (<i>n</i> = 227)	17	39	36	4	4
High school graduate (<i>n</i> = 1,115)	11	35	44	7	3
Baccalaureate (<i>n</i> = 346)	5	33	46	13	2
Graduate/professional degree (<i>n</i> = 176)	4	25	57	13	1
Science/mathematics education ^a					
Low (<i>n</i> = 1,042)	12	38	42	5	3
Middle (<i>n</i> = 359)	7	30	49	12	2
High (<i>n</i> = 408)	5	30	50	13	1
Family income (quartile)					
Top (<i>n</i> = 311)	5	31	51	13	—
Second (<i>n</i> = 420)	10	34	49	7	—
Third (<i>n</i> = 419)	10	41	40	6	2
Bottom (<i>n</i> = 462)	13	35	38	11	3
Age (years)					
18–24 (<i>n</i> = 157)	7	26	46	18	3
25–34 (<i>n</i> = 341)	9	38	42	8	2
35–44 (<i>n</i> = 382)	12	36	44	6	2
45–54 (<i>n</i> = 386)	11	30	47	10	1
55–64 (<i>n</i> = 272)	7	33	54	4	2
65+ (<i>n</i> = 321)	10	42	36	6	6
Minor children at home					
Yes (<i>n</i> = 588)	11	36	45	6	2
No (<i>n</i> = 1,276)	9	34	44	10	3
Factual knowledge of science ^b (quartile)					
Top (<i>n</i> = 455)	4	26	53	17	—
Second (<i>n</i> = 470)	11	31	48	8	2
Third (<i>n</i> = 479)	12	40	40	6	2
Bottom (<i>n</i> = 460)	13	41	36	2	7

— = <0.5% responded

^aLow = ≤5 high school and college science/math courses; middle = 6–8 courses; high = ≥9 courses.^bSee notes to appendix table 7-4 for explanation of “factual knowledge of science scale 1.”NOTES: Responses to: *Science makes our way of life change too fast*. Detail may not add to total because of rounding.

SOURCE: University of Chicago, National Opinion Research Center, General Social Survey (2006).

Appendix table 7-16

Public opinion on whether federal government should fund basic research: 1985–2006

(Percent)

Opinion	1985 (n = 2,003)	1988 (n = 2,041)	1990 (n = 2,005)	1992 (n = 1,995)	1995 (n = 2,006)	1997 (n = 2,000)	1999 (n = 1,882)	2001 (n = 1,574)	2004 (n = 2,025)	2006 (n = 1,864)
Strongly agree	9	16	18	14	17	22	21	19	29	32
Agree.....	70	65	63	63	61	57	61	62	53	55
Disagree.....	16	14	15	18	17	15	13	14	15	8
Strongly disagree.....	—	1	1	2	2	3	2	1	2	1
Don't know.....	5	4	4	3	3	3	3	4	1	3

— = ≤0.5% responded

NOTES: Responses to: *Even if it brings no immediate benefits, scientific research that advances the frontiers of knowledge is necessary and should be supported by the federal government.* Table includes all years for which data collected. Detail may not add to total because of rounding.

SOURCES: National Science Foundation, Division of Science Resources Statistics, Survey of Public Attitudes Toward and Understanding of Science and Technology (1985–2001); University of Michigan, Survey of Consumer Attitudes (2004); and University of Chicago, National Opinion Research Center, General Social Survey (2006).

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Appendix table 7-17

Public opinion on whether federal government should fund basic research, by respondent characteristic: 2006

(Percent)

Characteristic	Strongly agree	Agree	Disagree	Strongly disagree	Don't know
All adults (n = 1,864)	32	55	8	1	3
Sex					
Male (n = 804)	36	53	7	1	2
Female (n = 1,060)	29	57	9	1	4
Formal education					
<High school (n = 227)	33	45	11	2	9
High school graduate (n = 1,115)	29	58	9	2	3
Baccalaureate (n = 346)	34	59	6	0	1
Graduate/professional degree (n = 176)	46	46	7	0	1
Science/mathematics education ^a					
Low (n = 1,042)	29	57	9	2	4
Middle (n = 359)	34	54	7	2	3
High (n = 408)	38	54	7	0	—
Family income (quartile)					
Top (n = 311)	36	55	8	1	—
Second (n = 420)	32	60	5	1	1
Third (n = 419)	31	56	10	1	2
Bottom (n = 462)	32	54	9	2	3
Age (years)					
18–24 (n = 157)	36	54	6	2	2
25–34 (n = 341)	28	61	6	1	5
35–44 (n = 382)	32	57	9	1	1
45–54 (n = 386)	37	52	8	1	1
55–64 (n = 272)	32	52	10	1	6
65+ (n = 321)	27	53	12	1	6
Minor children at home					
Yes (n = 588)	30	57	8	2	4
No (n = 1,276)	33	54	8	1	3
Factual knowledge of science ^b (quartile)					
Top (n = 455)	45	48	6	1	—
Second (n = 470)	32	57	7	1	2
Third (n = 479)	29	59	9	1	3
Bottom (n = 460)	20	57	12	2	9

— = <0.5% responded

^aLow = ≤5 high school and college science/math courses; middle = 6–8 courses; high = ≥9 courses.^bSee notes to appendix table 7-4 for explanation of "factual knowledge of science scale 1."NOTES: Responses to: *Even if it brings no immediate benefits, scientific research that advances the frontiers of knowledge is necessary and should be supported by the federal government.* Detail may not add to total because of rounding.

SOURCE: University of Chicago, National Opinion Research Center, General Social Survey (2006).

Appendix table 7-18

Public assessment of federal government spending, by policy area: 1981–2006

(Percent)

Policy area	1981 (n = 1,611)	1983 (n = 1,631)	1985 (n = 2,003)	1988 (n = 2,041)	1990 (n = 2,005)	1992 (n = 1,995)	1997 (n = 2,000)	1999 (n = 1,882)	2001 (n = 1,574)	2002 (n = 2,765)	2004 (n = 2,812)	2006 (n = 2,992)
Exploring space												
Too little.....	18	17	9	17	9	12	14	15	11	12	14	14
Too much	42	39	45	43	52	50	45	46	48	36	38	35
Reducing pollution												
Too little.....	52	54	69	76	76	72	65	65	63	60	63	67
Too much	14	11	6	4	5	7	8	7	6	8	7	7
Improving health care												
Too little.....	61	NA	68	67	75	79	68	71	70	73	77	72
Too much	6	NA	3	2	3	4	7	6	4	5	6	7
Supporting scientific research ^a												
Too little.....	31	NA	29	34	30	34	34	37	36	34	38	41
Too much	18	NA	18	15	16	19	14	14	14	13	12	11
Improving education												
Too little.....	62	71	73	76	77	81	76	75	76	75	75	73
Too much	6	5	3	4	4	4	6	6	5	5	5	5
Helping older people												
Too little.....	74	NA	73	76	75	73	66	71	73	NA	NA	NA
Too much	3	NA	3	2	2	3	5	4	3	NA	NA	NA
Spending for Social Security												
Too little.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	59	64	61
Too much	NA	NA	NA	NA	NA	NA	NA	NA	NA	4	5	4
Improving national defense ^b												
Too little.....	34	19	11	11	15	15	23	31	29	33	33	26
Too much	26	47	50	52	40	40	32	25	25	20	26	38
Improving mass transportation												
Too little.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	34	34	38
Too much	NA	NA	NA	NA	NA	NA	NA	NA	NA	10	10	9
Assistance to other countries												
Too little.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	8	9	10
Too much	NA	NA	NA	NA	NA	NA	NA	NA	NA	66	64	62
Helping low-income people												
Too little.....	45	NA	54	55	57	56	43	49	53	NA	NA	NA
Too much	24	NA	13	12	15	17	23	19	15	NA	NA	NA
Assistance to the poor ^c												
Too little.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	66	69	68
Too much	NA	NA	NA	NA	NA	NA	NA	NA	NA	8	6	8

NA = not available, question not asked

^aQuestion asked of 1,358 survey respondents in 2002 and 1,401 respondents in 2004.^bQuestion asked of 1,021 survey respondents in 1988.^cQuestion asked of 1,407 survey respondents in 2002, 1,411 respondents in 2004, and 1,508 respondents in 2006.

NOTES: Responses to: *We are faced with many problems in this country, none of which can be solved easily or inexpensively. I'm going to name some of these problems, and for each one, I'd like you to tell me if you think that the Government is spending too little money on it, about the right amount, or too much.* Two versions of this question with different response categories administered. Table combines data for following sets of categories: space exploration program/space exploration; improving and protecting environment/environment; improving and protecting nation's health/health; improving nation's education system/education; military, armaments, and defense/national defense; assistance to other countries/foreign aid. Table includes all years for which data collected. Detail does not add to total because "about right amount" and "don't know" responses not shown.

SOURCES: National Science Foundation, Division of Science Resources Statistics, Survey of Public Attitudes Toward and Understanding of Science and Technology (1981–2001); and University of Chicago, National Opinion Research Center, General Social Survey (2002–06).

Appendix table 7-19

(Page 1 of 2)

Public assessment of federal government spending, by policy area and respondent characteristic: 2006

(Percent)

Characteristic	Exploring space		Reducing pollution		Improving health care		Supporting scientific research		Improving education	
	Too little	Too much	Too little	Too much	Too little	Too much	Too little	Too much	Too little	Too much
All adults (n = 2,992).....	14	35	67	7	72	7	41	11	73	5
Sex										
Male (n = 1,296).....	19	33	65	9	67	9	42	10	69	8
Female (n = 1,696).....	10	37	69	5	76	6	40	12	77	4
Formal education										
<High school (n = 442).....	9	47	57	10	66	8	36	17	64	5
High school graduate (n = 1,755).....	13	36	67	6	75	6	39	12	75	5
Baccalaureate (n = 524).....	17	26	70	6	70	8	46	7	71	8
Graduate/professional degree (n = 271).....	19	25	79	5	69	7	51	4	79	5
Science/mathematics education ^b										
Low (n = 1,042).....	12	38	65	8	77	5	37	13	74	5
Middle (n = 359).....	16	29	76	4	75	6	49	7	79	5
High (n = 408).....	20	27	72	6	71	7	45	6	77	6
Family income (quartile)										
Top (n = 457).....	18	29	74	5	68	10	48	7	76	6
Second (n = 663).....	15	29	66	6	72	7	39	8	74	6
Third (n = 685).....	12	39	69	7	75	5	39	12	76	5
Bottom (n = 773).....	12	44	64	8	73	8	39	17	71	4
Age (years)										
18–24 (n = 254).....	15	28	71	6	69	5	40	11	78	3
25–34 (n = 559).....	11	31	71	4	73	5	34	12	79	3
35–44 (n = 616).....	11	36	66	7	71	10	38	14	74	5
45–54 (n = 582).....	16	38	70	6	80	5	42	10	77	4
55–64 (n = 451).....	20	34	68	7	74	7	51	7	70	8
65+ (n = 522).....	12	43	54	11	64	8	43	12	59	11
Minor children at home										
Yes (n = 981).....	12	36	66	6	72	6	39	14	77	4
No (n = 2,011).....	15	35	68	7	72	7	42	10	71	6
Factual knowledge of science ^c (quartile)										
Top (n = 455).....	26	20	72	6	71	7	54	3	76	6
Second (n = 470).....	14	31	70	4	73	6	39	9	77	4
Third (n = 479).....	9	41	73	6	80	6	39	12	75	6
Bottom (n = 460).....	8	44	59	10	74	5	32	18	72	5

Appendix table 7-19

(Page 2 of 2)

Public assessment of federal government spending, by policy area and respondent characteristic: 2006

(Percent)

Characteristic	Spending for Social Security		Improving national defense		Improving mass transportation		Assistance to other countries		Assistance to the poor ^a	
	Too little	Too much	Too little	Too much	Too little	Too much	Too little	Too much	Too little	Too much
All adults (n = 2,992)	61	5	26	39	39	8	11	62	68	8
Sex										
Male (n = 1,296)	56	6	26	41	41	10	10	64	65	9
Female (n = 1,696)	65	3	25	36	38	7	11	60	71	7
Formal education										
< High school (n = 442)	65	3	26	40	33	11	16	50	81	5
High school graduate (n = 1,755)	66	4	28	36	34	9	8	67	69	7
Baccalaureate (n = 524)	50	7	21	42	51	7	12	59	58	10
Graduate/professional degree (n = 271)	44	6	19	49	58	3	16	53	63	10
Science/mathematics education ^b										
Low (n = 1,042)	67	4	30	32	33	10	8	65	72	6
Middle (n = 359)	58	4	26	38	45	6	9	64	67	7
High (n = 408)	51	6	22	44	50	7	12	59	61	8
Family income (quartile)										
Top (n = 457)	51	7	26	38	50	7	11	61	62	10
Second (n = 663)	62	5	26	38	40	10	7	67	67	9
Third (n = 685)	65	4	27	38	39	9	11	63	73	7
Bottom (n = 773)	65	4	22	43	32	8	13	58	75	5
Age (years)										
18–24 (n = 254)	51	7	19	45	28	7	19	44	68	7
25–34 (n = 559)	62	7	23	44	36	8	13	53	69	7
35–44 (n = 616)	67	5	23	41	37	11	11	63	70	6
45–54 (n = 582)	67	4	24	38	42	6	9	70	73	5
55–64 (n = 451)	62	2	32	33	49	9	8	69	71	9
65+ (n = 522)	49	3	34	29	40	10	6	68	55	12
Minor children at home										
Yes (n = 981)	63	4	25	38	34	8	11	60	70	5
No (n = 2,011)	59	5	26	39	42	9	10	63	67	9
Factual knowledge of science ^c (quartile)										
Top (n = 455)	48	5	22	42	51	7	13	60	59	8
Second (n = 470)	62	5	27	39	37	8	9	62	70	7
Third (n = 479)	68	4	30	35	38	9	8	67	73	7
Bottom (n = 460)	68	3	30	28	32	9	7	67	73	4

^aQuestion asked of 1,508 survey respondents.^bLow = ≤5 high school and college science/math courses; middle = 6–8 courses; high = ≥9 courses. Science/mathematics education asked of 1,864 survey respondents; information available for 1,809 respondents.^cSee notes to appendix table 7-4 for explanation of "factual knowledge of science scale 1." Questions used in scale asked of 1,864 survey respondents.

NOTES: Responses to: *We are faced with many problems in this country, none of which can be solved easily or inexpensively. I'm going to name some of these problems, and for each one, I'd like you to tell me if you think that the Government is spending too little money on it, about the right amount, or too much.* Detail does not add to total because "about the right amount" and "do not know" responses not shown. See notes to appendix table 7-18 for explanation of policy area categories.

SOURCE: University of Chicago, National Opinion Research Center, General Social Survey (2006).

Appendix table 7-20

Public confidence in institutional leaders: 1973–2006

(Percent)

Year (number)	Military	Scientific community	Medicine	U.S. Supreme Court	Banks and financial institutions	Education	Organized religion	Major companies	Executive branch of federal government	Organized labor	Congress	Press	Television	Mean ^a
1973 (n = 1,504)	32	37	54	31	NA	37	34	29	29	15	23	23	18	30
1974 (n = 1,484)	39	45	61	33	NA	49	44	31	14	19	17	25	23	33
1975 (n = 1,490)	35	37	51	30	31	31	24	19	13	10	13	24	18	25
1976 (n = 1,499)	40	42	54	34	39	37	30	21	13	11	13	28	18	29
1977 (n = 1,530)	36	41	53	36	42	40	40	27	27	15	19	25	18	31
1978 (n = 1,532)	30	36	46	28	32	28	30	21	12	11	13	20	14	24
1980 (n = 1,468)	28	41	53	24	32	30	35	27	12	15	9	22	15	26
1982 (n = 1,860)	29	35	45	30	26	35	33	21	17	13	13	18	15	25
1983 (n = 1,599)	30	42	52	27	23	28	28	24	13	8	10	13	12	24
1984 (n = 989)	36	44	50	33	30	28	30	30	19	8	13	17	13	27
1986 (n = 1,470)	31	39	47	30	21	28	25	25	21	9	16	19	15	25
1987 (n = 1,819)	34	41	51	35	27	36	30	28	17	12	16	19	12	28
1988 (n = 997)	35	39	52	35	27	30	21	25	16	11	16	19	14	26
1989 (n = 1,035)	33	41	47	35	18	30	22	25	20	9	17	17	14	26
1990 (n = 899)	33	38	45	34	17	27	23	26	24	11	16	14	14	25
1991 (n = 1,017)	61	40	48	37	12	30	25	20	27	11	18	16	15	29
1993 (n = 1,057)	41	37	40	30	14	22	22	21	11	8	6	11	12	22
1994 (n = 2,011)	37	39	42	31	18	25	25	26	11	11	8	10	10	23
1996 (n = 1,925)	39	40	45	28	24	23	25	24	10	11	7	11	10	23
1998 (n = 1,911)	36	40	45	31	26	27	27	26	13	11	10	9	10	24
2000 (n = 1,896)	40	41	44	32	29	27	28	28	13	13	13	10	10	25
2002 (n = 912)	56	37	37	36	22	26	19	17	27	12	14	10	9	25
2004 (n = 876)	58	42	38	32	29	29	23	18	22	13	15	9	10	26
2006 (n = 1,989)	47	41	40	33	30	28	24	18	16	12	12	10	9	24

NA = not available, question not asked

^aExcludes banks and financial institutions.

NOTES: Data represent respondents expressing “great deal of confidence” when asked: *As far as the people running these institutions are concerned, would you say that you have a great deal of confidence, only some confidence, or hardly any confidence at all in them?* Sample size not exact for all institutions. Table includes all years for which data collected.

SOURCE: University of Chicago, National Opinion Research Center, General Social Survey (1973–2006).

Appendix table 7-21

Preferred groups for influencing decisions about public issues, by respondent characteristic: 2006

(Mean preferred influence score)

Characteristic	Global warming			Stem cell research			Federal income taxes			Genetically modified foods		
	Environmental scientists (n = 888)	Business leaders (n = 883)	Elected officials (n = 887)	Medical researchers (n = 880)	Religious leaders (n = 875)	Elected officials (n = 872)	Economists (n = 875)	Business leaders (n = 888)	Elected officials (n = 890)	Medical researchers (n = 887)	Business leaders (n = 883)	Elected officials (n = 884)
All adults	3.35	2.17	2.55	3.21	2.09	2.45	2.95	2.45	2.74	3.26	1.88	2.24
Sex												
Male	3.28	2.22	2.64	3.15	2.05	2.57	2.94	2.47	2.77	3.28	1.96	2.30
Female	3.42	2.13	2.48	3.26	2.12	2.35	2.95	2.43	2.71	3.25	1.81	2.20
Formal education												
<High school	3.24	2.15	2.46	3.36	2.13	2.27	2.81	2.61	2.79	3.08	2.32	2.48
High school graduate	3.37	2.13	2.47	3.17	2.12	2.39	2.87	2.44	2.70	3.24	1.87	2.17
Baccalaureate	3.27	2.31	2.79	3.16	2.08	2.65	3.13	2.41	2.87	3.36	1.71	2.39
Graduate/professional	3.57	2.18	2.71	3.38	1.78	2.60	3.13	2.41	2.67	3.41	1.74	2.11
Science/mathematics education ^a												
Low	3.32	2.15	2.46	3.24	2.19	2.32	2.84	2.50	2.70	3.19	1.97	2.25
Middle	3.39	2.12	2.63	3.24	1.99	2.53	3.07	2.45	2.77	3.40	1.84	2.19
High	3.41	2.26	2.69	3.13	1.93	2.62	3.10	2.32	2.76	3.31	1.68	2.25
Family income (quartile)												
Top	3.45	2.18	2.71	3.20	2.02	2.46	2.99	2.37	2.79	3.37	1.81	2.25
Second	3.30	2.14	2.51	3.12	2.11	2.50	2.97	2.35	2.67	3.31	1.87	2.23
Third	3.47	2.22	2.58	3.22	2.11	2.47	2.96	2.58	2.80	3.20	1.91	2.29
Bottom	3.28	2.06	2.40	3.34	2.15	2.35	2.79	2.53	2.74	3.18	1.93	2.23
Age (years)												
18–24	3.43	2.02	2.55	3.28	1.91	2.53	3.08	2.37	3.22	3.58	1.81	2.50
25–34	3.45	2.12	2.58	3.31	1.92	2.46	3.01	2.44	2.77	3.26	1.83	2.39
35–44	3.38	2.26	2.65	3.15	2.10	2.63	2.84	2.39	2.68	3.14	1.84	2.23
45–54	3.34	2.22	2.62	3.16	2.14	2.40	2.86	2.32	2.62	3.22	1.79	2.06
55–64	3.32	2.16	2.44	3.17	2.10	2.32	3.06	2.66	2.65	3.35	1.98	2.20
65+	3.17	2.22	2.42	3.21	2.31	2.31	2.94	2.64	2.70	3.21	2.09	2.21
Minor children at home												
Yes	3.37	2.17	2.60	3.19	2.18	2.57	2.87	2.45	2.77	3.29	1.87	2.30
No	3.35	2.17	2.53	3.22	2.04	2.39	2.98	2.45	2.72	3.25	1.88	2.21
Factual knowledge of science ^b (quartile)												
Top	3.34	2.14	2.66	3.15	1.87	2.61	3.05	2.35	2.74	3.34	1.72	2.23
Second	3.38	2.10	2.48	3.16	1.96	2.43	2.95	2.47	2.75	3.31	1.81	2.28
Third	3.42	2.28	2.59	3.28	2.20	2.42	2.95	2.46	2.77	3.22	1.93	2.16
Bottom	3.28	2.18	2.47	3.27	2.37	2.29	2.78	2.53	2.67	3.15	2.11	2.33

^aLow = ≤5 high school and college science/math courses; middle = 6–8 courses; high = ≥9 courses.^bSee notes to appendix table 7-4 for explanation of "factual knowledge of science scale 1."

NOTES: Responses to: *How much influence should each of the following groups have in deciding: global warming policy; government funding for stem cell research; reducing federal income taxes; restricting sale of genetically modified foods?* See chapter endnote 23 for precise question wording. Mean preferred influence score based on 4-point scale, where 1 = none at all, 2 = a little influence, 3 = a fair amount, 4 = a great deal of influence. Questions on global warming and stem cell research asked of 928 survey respondents; questions on federal income taxes and genetically modified foods asked of 936 survey respondents. Number (n) of respondents varies by group within issue because mean preferred influence score excludes responses of "don't know."

SOURCE: University of Chicago, National Opinion Research Center, General Social Survey (2006).

Appendix table 7-22

Perceived understanding of public issues by various groups, by respondent characteristic: 2006

(Mean understanding score)

Characteristic	Global warming			Stem cell research			Federal income taxes			Genetically modified foods		
	Environmental scientists (n = 891)	Business leaders (n = 890)	Elected officials (n = 887)	Medical researchers (n = 872)	Religious leaders (n = 870)	Elected officials (n = 867)	Economists (n = 876)	Business leaders (n = 890)	Elected officials (n = 889)	Medical researchers (n = 888)	Business leaders (n = 883)	Elected officials (n = 884)
All adults	4.02	2.36	2.39	4.21	2.37	2.39	3.68	3.37	2.89	3.81	2.08	2.52
Sex												
Male	3.91	2.37	2.36	4.19	2.27	2.42	3.61	3.39	2.83	3.86	2.10	2.58
Female	4.10	2.36	2.42	4.23	2.46	2.37	3.73	3.35	2.93	3.77	2.07	2.48
Formal education												
<High school	3.83	2.27	2.42	4.29	2.28	2.60	2.96	2.99	2.86	3.46	2.45	2.62
High school graduate	3.96	2.33	2.38	4.15	2.39	2.33	3.61	3.33	2.90	3.79	2.08	2.50
Baccalaureate	4.15	2.58	2.58	4.27	2.47	2.56	4.05	3.53	2.88	4.00	1.95	2.61
Graduate/professional	4.33	2.21	2.00	4.38	2.14	2.19	4.09	3.68	2.83	3.97	1.93	2.38
Science/mathematics education ^a												
Low	3.94	2.39	2.44	4.19	2.38	2.38	3.44	3.25	2.86	3.68	2.15	2.55
Middle	4.11	2.37	2.49	4.12	2.34	2.36	3.84	3.47	2.96	3.95	2.11	2.53
High	4.18	2.31	2.21	4.36	2.35	2.39	4.10	3.57	2.86	4.02	1.87	2.44
Family income (quartile)												
Top	4.16	2.45	2.40	4.28	2.32	2.42	4.12	3.60	2.91	4.03	2.09	2.60
Second	4.17	2.28	2.32	4.14	2.45	2.40	3.65	3.35	2.87	3.82	2.08	2.50
Third	4.02	2.35	2.35	4.32	2.43	2.38	3.61	3.37	3.10	3.74	2.06	2.54
Bottom	3.80	2.33	2.42	4.21	2.28	2.34	3.34	3.20	2.73	3.56	2.12	2.51
Age (years)												
18–24	4.12	2.16	2.48	4.32	2.20	2.51	4.00	3.55	3.28	4.27	1.90	2.85
25–34	4.19	2.46	2.53	4.20	2.27	2.45	3.56	3.30	2.95	3.75	2.07	2.75
35–44	4.09	2.41	2.42	4.19	2.41	2.49	3.65	3.39	2.91	3.82	2.08	2.52
45–54	4.10	2.43	2.45	4.15	2.44	2.35	3.75	3.38	2.89	3.88	2.02	2.32
55–64	3.76	2.21	2.15	4.24	2.21	2.16	3.70	3.40	2.47	3.73	2.10	2.33
65+	3.76	2.41	2.28	4.19	2.66	2.36	3.50	3.27	2.86	3.55	2.31	2.46
Minor children at home												
Yes	4.12	2.39	2.45	4.21	2.46	2.42	3.67	3.45	3.11	4.00	2.13	2.61
No	3.97	2.35	2.37	4.21	2.33	2.37	3.68	3.33	2.77	3.71	2.05	2.47
Factual knowledge of science ^b (quartile)												
Top	4.11	2.37	2.31	4.46	2.31	2.39	4.13	3.52	2.82	4.07	1.91	2.46
Second	4.03	2.27	2.36	4.18	2.27	2.40	3.85	3.49	2.93	3.82	2.10	2.68
Third	4.15	2.44	2.46	4.15	2.48	2.47	3.50	3.32	2.90	3.78	1.99	2.29
Bottom	3.74	2.38	2.47	4.02	2.44	2.28	3.05	3.07	2.89	3.52	2.39	2.67

^aLow = ≤5 high school and college science/math courses; middle = 6–8 courses; high = ≥9 courses.

^bSee notes to appendix table 7-4 for explanation of "factual knowledge of science scale 1."

NOTES: Responses to: *How well do the following groups understand: causes of global warming; importance of stem cell research; effects of reducing federal income taxes; risks posed by genetically modified foods?* See chapter endnote 24 for precise question wording. Mean understanding score based on 5-point scale, where 5 = understands very well and 1 = understands not at all. Questions on global warming and stem cell research asked of 928 survey respondents; questions on federal income taxes and genetically modified foods asked of 936 survey respondents. Number (n) of respondents varies by group within issue because mean understanding score excludes responses of "don't know."

SOURCE: University of Chicago, National Opinion Research Center, General Social Survey (2006).

Appendix table 7-23

Perceived impartiality of various groups when making policy recommendations about public issues, by respondent characteristic: 2006

(Mean impartiality score)

Characteristic	Global warming			Stem cell research			Federal income taxes			Genetically modified foods		
	Environmental scientists (n = 883)	Business leaders (n = 889)	Elected officials (n = 879)	Medical researchers (n = 883)	Religious leaders (n = 873)	Elected officials (n = 882)	Economists (n = 875)	Business leaders (n = 889)	Elected officials (n = 897)	Medical researchers (n = 888)	Business leaders (n = 883)	Elected officials (n = 884)
All adults	3.93	2.13	2.47	3.71	2.62	2.47	3.51	2.22	2.56	3.81	2.08	2.52
Sex												
Male	3.82	2.05	2.45	3.65	2.55	2.47	3.43	2.30	2.62	3.86	2.10	2.58
Female	4.01	2.19	2.49	3.76	2.68	2.47	3.56	2.16	2.50	3.77	2.07	2.48
Formal education												
<High school	3.94	2.46	2.78	3.80	2.69	2.56	3.05	2.35	2.73	3.46	2.45	2.62
High school graduate	3.86	2.12	2.42	3.67	2.71	2.42	3.36	2.17	2.53	3.79	2.08	2.50
Baccalaureate	4.03	2.09	2.58	3.79	2.60	2.66	3.97	2.29	2.72	4.00	1.95	2.61
Graduate/professional	4.12	1.83	2.19	3.66	1.97	2.33	3.89	2.23	2.22	3.97	1.93	2.38
Science/mathematics education ^a												
Low	3.91	2.27	2.55	3.76	2.76	2.41	3.22	2.20	2.57	3.68	2.15	2.55
Middle	3.90	1.95	2.42	3.79	2.61	2.53	3.72	2.39	2.60	3.95	2.11	2.53
High	4.07	1.99	2.41	3.57	2.30	2.56	3.98	2.15	2.45	4.02	1.87	2.44
Family income (quartile)												
Top	4.03	1.95	2.34	3.70	2.45	2.51	3.77	2.27	2.58	4.03	2.09	2.60
Second	3.90	2.18	2.42	3.63	2.47	2.41	3.46	2.16	2.59	3.82	2.08	2.50
Third	4.01	2.30	2.66	3.68	2.58	2.47	3.36	2.25	2.57	3.74	2.06	2.54
Bottom	3.88	2.13	2.51	3.84	2.85	2.53	3.45	2.32	2.52	3.56	2.12	2.51
Age (years)												
18–24	4.06	2.15	2.86	3.73	2.76	2.62	3.94	2.05	3.05	4.27	1.90	2.85
25–34	4.03	2.01	2.71	3.74	2.48	2.69	3.36	2.15	2.86	3.75	2.07	2.75
35–44	4.00	2.08	2.38	3.79	2.70	2.60	3.51	2.18	2.43	3.82	2.08	2.52
45–54	4.01	2.14	2.41	3.70	2.51	2.29	3.63	2.10	2.23	3.88	2.02	2.32
55–64	3.66	2.01	2.05	3.54	2.43	2.11	3.46	2.42	2.42	3.73	2.10	2.33
65+	3.74	2.43	2.54	3.74	2.91	2.57	3.24	2.51	2.55	3.55	2.31	2.46
Minor children at home												
Yes	4.02	1.97	2.36	3.77	2.73	2.45	3.56	2.27	2.66	4.00	2.13	2.61
No	3.88	2.20	2.53	3.68	2.56	2.49	3.48	2.20	2.50	3.71	2.05	2.47
Factual knowledge of science ^b (quartile)												
Top	3.95	1.83	2.33	3.58	2.21	2.36	3.94	2.18	2.47	4.07	1.91	2.46
Second	3.98	1.94	2.18	3.78	2.57	2.37	3.51	2.16	2.60	3.82	2.10	2.68
Third	4.01	2.42	2.78	3.81	2.78	2.61	3.37	2.27	2.61	3.78	1.99	2.29
Bottom	3.74	2.37	2.61	3.68	3.00	2.57	3.11	2.30	2.53	3.52	2.39	2.67

^aLow = ≤5 high school and college science/math courses; middle = 6–8 courses; high = ≥9 courses.^bSee notes to appendix table 7-4 for explanation of "factual knowledge of science scale 1."

NOTES: Responses to: *When making policy recommendations about [public issue], to what extent do you think the following groups would support what is best for the country as a whole versus what serves their own narrow interests?* See chapter endnote 25 for full question wording. Mean impartiality score based on 5-point scale, where 5 = best for the country and 1 = own narrow interests. Questions on global warming and stem cell research asked of 928 survey respondents; questions on federal income taxes and genetically modified foods asked of 936 survey respondents. Number (n) of respondents varies by group within issue because mean impartiality score excludes responses of "don't know."

SOURCE: University of Chicago, National Opinion Research Center, General Social Survey (2006).

Appendix table 7-24

Public perception of degree of scientific consensus on current issues, by respondent characteristic: 2006

(Mean score)

Characteristic	Environmental scientists on existence and causes of global warming (<i>n</i> = 850)	Medical researchers on importance of stem cells for research (<i>n</i> = 851)	Economists on effects of reducing federal income taxes (<i>n</i> = 811)	Medical researchers on risks and benefits of genetically modified foods (<i>n</i> = 815)
All adults	3.38	3.64	2.83	3.12
Sex				
Male	3.33	3.71	2.85	3.21
Female	3.43	3.59	2.81	3.04
Formal education				
<High school	3.12	3.72	2.78	3.16
High school graduate	3.38	3.56	2.82	3.07
Baccalaureate	3.36	3.79	2.90	3.23
Graduate/professional	3.77	3.83	2.81	3.18
Science/mathematics education ^a				
Low	3.38	3.55	2.81	3.04
Middle	3.37	3.71	2.83	3.26
High	3.45	3.76	2.87	3.18
Family income (quartile)				
Top	3.52	3.67	2.77	3.10
Second	3.30	3.52	2.90	3.20
Third	3.48	3.74	2.98	3.25
Bottom	3.33	3.64	2.66	3.00
Age (years)				
18–24	3.23	3.52	2.74	3.28
25–34	3.58	3.77	2.96	3.19
35–44	3.42	3.58	2.75	3.09
45–54	3.44	3.63	2.83	3.00
55–64	3.18	3.71	2.71	3.14
65+	3.35	3.65	2.93	3.13
Minor children at home				
Yes	3.41	3.58	2.87	3.18
No	3.37	3.67	2.81	3.09
Factual knowledge of science ^b (quartile)				
Top	3.36	3.76	2.95	3.20
Second	3.41	3.61	2.83	3.16
Third	3.44	3.58	2.77	3.09
Bottom	3.32	3.62	2.74	3.01

^aLow = ≤5 high school and college science/math courses; middle = 6–8 courses; high = ≥9 courses.^bSee notes to appendix table 7-4 for explanation of "factual knowledge of science scale 1."

NOTES: Responses to: *To what extent do [members of group] agree among themselves about [public issue]?* See chapter endnote 26 for full question wording. Mean consensus score based on 5-point scale, where 5 = near complete agreement and 1 = no agreement at all. Questions on global warming and stem cell research asked of 928 survey respondents; questions on federal income taxes and genetically modified foods asked of 936 survey respondents. Number (*n*) of respondents varies by group/issue because mean consensus score excludes responses of "don't know."

SOURCE: University of Chicago, National Opinion Research Center, General Social Survey (2006).

Appendix table 7-25

Importance of process, credentials, and external validation to belief that something is scientific: 2006

(Percent)

Attribute (n = 1,864)	Very important	Pretty important	Not too important	Not important at all	Don't know
Process					
Solid evidence	80	14	2	1	3
Different interpretations.....	73	20	2	1	4
Repeated experiment.....	67	26	3	1	4
Credentials					
Advanced degrees	62	28	5	1	3
University setting	33	47	13	4	4
Laboratory.....	41	31	20	5	4
External validation					
Common sense.....	39	34	15	8	3
Religious beliefs	10	16	31	39	5

NOTES: Responses to how important each of eight statements is to making something scientific. Process statements: (1) *The conclusions are based on solid evidence*; (2) *The researchers carefully examine different interpretations of the results, even ones they disagree with*; (3) *Other scientists repeat the experiment, and find similar results*. Credentials statements: (1) *The people who do it have advanced degrees in their field*; (2) *It is done by scientists employed in a university setting*; (3) *The research takes place in a laboratory*. External validation statements: (1) *The results of the research are consistent with common sense*; (2) *The results of the research are consistent with religious beliefs*.

SOURCE: University of Chicago, National Opinion Research Center, General Social Survey (2006).

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Appendix table 7-26

Importance of process, credentials, and external validation to belief that something is scientific, by respondent characteristic: 2006

(Mean score)

Characteristic	Process			Credentials			External validation	
	Solid evidence (n = 1,807)	Different interpretations (n = 1,783)	Repeated experiment (n = 1,788)	Advanced degrees (n = 1,801)	University setting (n = 1,787)	Laboratory (n = 1,787)	Common sense (n = 1,794)	Religious beliefs (n = 1,775)
All adults	3.79	3.72	3.65	3.56	3.12	3.12	3.09	1.96
Sex								
Male	3.79	3.71	3.65	3.54	3.09	3.10	3.08	1.87
Female	3.79	3.74	3.66	3.58	3.14	3.14	3.10	2.03
Formal education								
<High school	3.69	3.51	3.52	3.64	3.24	3.51	3.31	2.31
High school graduate	3.77	3.70	3.63	3.57	3.13	3.16	3.19	2.08
Baccalaureate	3.84	3.81	3.73	3.52	3.02	2.91	2.90	1.63
Graduate/professional	3.90	3.89	3.76	3.54	3.09	2.87	2.56	1.48
Science/mathematics education ^a								
Low	3.73	3.66	3.62	3.59	3.16	3.29	3.27	2.14
Middle	3.81	3.73	3.60	3.57	3.11	3.03	3.01	1.87
High	3.90	3.88	3.79	3.50	3.04	2.82	2.70	1.60
Family income (quartile)								
Top	3.87	3.85	3.77	3.54	3.12	2.93	2.83	1.66
Second	3.78	3.71	3.64	3.52	3.07	3.13	3.11	1.86
Third	3.80	3.76	3.62	3.68	3.18	3.18	3.15	2.10
Bottom	3.69	3.57	3.53	3.52	3.12	3.20	3.12	2.11
Age (years)								
18–24	3.80	3.74	3.64	3.61	3.05	2.76	2.88	1.94
25–34	3.72	3.70	3.61	3.52	3.08	3.10	3.05	1.91
35–44	3.78	3.74	3.65	3.55	3.11	3.09	3.01	1.94
45–54	3.86	3.76	3.70	3.58	3.16	3.12	3.08	1.86
55–64	3.81	3.78	3.68	3.54	3.00	3.24	3.14	1.95
65+	3.74	3.61	3.63	3.60	3.28	3.38	3.37	2.24
Minor children at home								
Yes	3.77	3.72	3.65	3.57	3.14	3.12	3.10	2.01
No	3.79	3.72	3.65	3.56	3.10	3.12	3.08	1.93
Factual knowledge of science ^b (quartile)								
Top	3.86	3.85	3.73	3.54	3.05	2.84	2.77	1.50
Second	3.85	3.75	3.70	3.61	3.16	3.09	3.02	1.94
Third	3.79	3.74	3.68	3.57	3.13	3.23	3.29	2.08
Bottom	3.62	3.50	3.45	3.52	3.12	3.37	3.31	2.41

^aLow = ≤5 high school and college science/math courses; middle = 6–8 courses; high = ≥9 courses.

^bSee notes to appendix table 7-4 for explanation of “factual knowledge of science scale 1.”

NOTES: Responses to how important each of eight statements is to making something scientific. Mean importance score based on 4-point scale, where 4 = very important and 1 = not important at all. Questions asked of 1,864 survey respondents; number (n) of respondents varies by statement because mean importance score excludes responses of “don’t know.” Process statements: (1) *The conclusions are based on solid evidence*; (2) *The researchers carefully examine different interpretations of the results, even ones they disagree with*; (3) *Other scientists repeat the experiment, and find similar results*. Credentials statements: (1) *The people who do it have advanced degrees in their field*; (2) *It is done by scientists employed in a university setting*; (3) *The research takes place in a laboratory*. External validation statements: (1) *The results of the research are consistent with common sense*; (2) *The results of the research are consistent with religious beliefs*.

SOURCE: University of Chicago, National Opinion Research Center, General Social Survey (2006).

Appendix table 7-27

Perceptions of scientific nature of various fields, by respondent characteristic: 2006

(Mean scientific score)

Characteristic	Medicine (n = 1,829)	Biology (n = 1,800)	Physics (n = 1,730)	Engineering (n = 1,785)	Economics (n = 1,769)	Sociology (n = 1,593)	Accounting (n = 1,785)	History (n = 1,799)
All adults	3.81	3.68	3.68	3.21	2.56	2.56	2.15	2.11
Sex								
Male	3.79	3.68	3.72	3.30	2.50	2.54	2.10	2.13
Female	3.82	3.69	3.65	3.13	2.61	2.58	2.19	2.09
Formal education								
<High school	3.80	3.57	3.36	2.98	2.71	2.74	2.16	2.32
High school graduate	3.82	3.65	3.64	3.16	2.48	2.53	2.11	2.18
Baccalaureate	3.77	3.76	3.84	3.37	2.65	2.56	2.21	1.85
Graduate/professional	3.79	3.84	3.92	3.45	2.70	2.60	2.29	1.92
Science/mathematics education ^a								
Low	3.81	3.61	3.56	3.08	2.51	2.54	2.06	2.20
Middle	3.82	3.74	3.76	3.22	2.54	2.62	2.17	2.06
High	3.79	3.83	3.89	3.46	2.67	2.54	2.31	1.93
Family income (quartile)								
Top	3.80	3.73	3.82	3.27	2.64	2.57	2.18	1.98
Second	3.84	3.68	3.71	3.27	2.45	2.52	2.04	2.07
Third	3.79	3.69	3.68	3.11	2.51	2.57	2.12	2.13
Bottom	3.77	3.60	3.53	3.17	2.67	2.68	2.19	2.31
Age (years)								
18–24	3.81	3.68	3.72	3.14	2.58	2.67	1.96	2.08
25–34	3.84	3.72	3.66	3.21	2.58	2.67	2.00	2.09
35–44	3.83	3.72	3.69	3.27	2.56	2.54	2.20	2.10
45–54	3.80	3.70	3.71	3.25	2.59	2.53	2.15	2.10
55–64	3.78	3.68	3.66	3.16	2.41	2.50	2.25	2.05
65+	3.78	3.58	3.63	3.16	2.63	2.46	2.33	2.24
Minor children at home								
Yes	3.83	3.71	3.68	3.22	2.53	2.58	2.12	2.09
No	3.80	3.67	3.68	3.20	2.57	2.55	2.17	2.12
Factual knowledge of science ^b (quartile)								
Top	3.80	3.84	3.90	3.43	2.62	2.60	2.18	1.98
Second	3.84	3.73	3.74	3.30	2.51	2.56	2.15	2.01
Third	3.80	3.60	3.61	3.07	2.58	2.58	2.13	2.19
Bottom	3.78	3.55	3.40	2.98	2.53	2.48	2.13	2.28

^aLow = ≤5 high school and college science/math courses; middle = 6–8 courses; high = ≥9 courses.^bSee notes to appendix table 7-4 for explanation of “factual knowledge of science scale 1.”NOTES: Responses to: *How scientific is [field]: very scientific, pretty scientific, not too scientific, not scientific at all?* (where 4 is very scientific and 1 is not scientific at all). Question asked of 1,864 survey respondents; number (n) of respondents varies by field because mean scientific score excludes responses of “haven’t heard of [field]” or “don’t know.”

SOURCE: University of Chicago, National Opinion Research Center, General Social Survey (2006).

Appendix table 7-28
Familiarity with nanotechnology, by respondent characteristic: 2006
 (Percent)

Characteristic	How much respondents have heard about nanotechnology				
	A lot	Some	Just a little	Nothing at all	Don't know
All adults (n = 1,864)	5	15	25	54	2
Sex					
Male (n = 804)	8	24	23	44	1
Female (n = 1,060).....	2	8	26	62	2
Formal education					
<High school (n = 227)	2	4	15	78	1
High school graduate (n = 1,115)	3	14	23	58	2
Baccalaureate (n = 346).....	7	23	30	38	2
Graduate/professional degree (n = 176)	13	20	38	29	—
Science/mathematics education ^a					
Low (n = 1,042)	2	9	19	67	2
Middle (n = 359)	5	21	33	41	—
High (n = 408).....	12	25	32	31	—
Family income (quartile)					
Top (n = 311)	8	23	28	40	1
Second (n = 420)	4	18	28	48	2
Third (n = 419).....	4	10	25	59	1
Bottom (n = 462).....	5	12	22	61	1
Age (years)					
18–24 (n = 157).....	4	20	33	42	1
25–34 (n = 341).....	4	12	27	56	1
35–44 (n = 382).....	7	13	25	54	1
45–54 (n = 386).....	6	16	26	50	2
55–64 (n = 272).....	5	23	19	51	1
65+ (n = 321)	3	8	18	69	2
Minor children at home					
Yes (n = 588).....	5	16	24	54	1
No (n = 1,276).....	5	15	25	54	2
Factual knowledge of science ^b (quartile)					
Top (n = 455)	13	31	38	18	—
Second (n = 470)	4	16	27	51	2
Third (n = 479).....	1	8	23	66	2
Bottom (n = 460).....	1	3	10	83	2

— = ≤0.5% responded

^aLow = ≤5 high school and college science/math courses; middle = 6–8 courses; high = ≥9 courses.

^bSee notes to appendix table 7-4 for explanation of “factual knowledge of science scale 1.”

NOTES: Responses to: *How much have you heard about nanotechnology? Have you heard a lot, some, just a little, or nothing at all?* Detail may not add to total because of rounding.

SOURCE: University of Chicago, National Opinion Research Center, General Social Survey (2006).

Appendix table 7-29

Public assessment of benefits and harms of nanotechnology, by respondent characteristic: 2006

(Percent)

Characteristic	Benefits will outweigh harmful results	Benefits will be about equal to harmful results	Harmful results will outweigh benefits	Don't know
All adults (n = 1,864)	40	19	9	32
Sex				
Male (n = 804)	49	18	8	24
Female (n = 1,060).....	33	20	9	39
Formal education				
<High school (n = 227)	14	28	15	43
High school graduate (n = 1,115)	38	19	10	34
Baccalaureate (n = 346).....	52	17	4	27
Graduate/professional degree (n = 176)	63	14	2	22
Science/mathematics education ^a				
Low (n = 1,042)	28	22	11	39
Middle (n = 359)	50	19	8	24
High (n = 408).....	62	13	3	22
Family income (quartile)				
Top (n = 311)	53	16	7	24
Second (n = 420)	42	22	7	29
Third (n = 419).....	37	20	9	34
Bottom (n = 462).....	37	18	13	32
Age (years)				
18–24 (n = 157).....	45	22	13	20
25–34 (n = 341).....	41	20	9	30
35–44 (n = 382).....	38	23	5	34
45–54 (n = 386).....	44	16	10	30
55–64 (n = 272).....	41	17	9	33
65+ (n = 321)	30	16	7	47
Minor children at home				
Yes (n = 588).....	39	19	10	32
No (n = 1,276).....	40	19	8	33
Factual knowledge of science ^b (quartile)				
Top (n = 455)	68	12	2	19
Second (n = 470)	45	20	7	27
Third (n = 479).....	30	22	12	36
Bottom (n = 460).....	14	23	14	50

^aLow = ≤5 high school and college science/math courses; middle = 6–8 courses; high = ≥9 courses.^bSee notes to appendix table 7-4 for explanation of "factual knowledge of science scale 1."

NOTES: Responses to: *Nanotechnology works at the molecular level atom by atom to build new structures, materials, and machines. People have frequently noted that new technologies have produced both benefits and harmful results. Do you think the benefits of nanotechnology will outweigh the harmful results or the harmful results will outweigh the benefits?* Detail may not add to total because of rounding.

SOURCE: University of Chicago, National Opinion Research Center, General Social Survey (2006).