

**Priorities for Preventive Action**  
**Explaining Americans' Divergent Reactions to 100 Public Risks**

Supplementary material for online publication only

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## Section 1. Risk indices

Table S1 shows values (0-1) and rankings (1-100) for each risk across each survey index. Table S2 shows rankings for each index separately. Table S2 also allows readers to compare rankings of perceived mortality versus actual mortality.

<b>Risk</b>	<b>Priority</b>	<b>Priority-margin</b>	<b>Harm</b>	<b>Mortality</b>	<b>Fairness</b>	<b>Responsibility</b>	<b>Disaster potential</b>	<b>Long-term growth</b>	<b>Worry</b>
Air pollution	6 (0.74)	10 (0.71)	38 (0.57)	63 (0.45)	21 (0.61)	6 (0.81)	23 (0.64)	7 (0.74)	16 (0.65)
Air warfare	46 (0.55)	65 (0.43)	87 (0.29)	83 (0.27)	48 (0.50)	15 (0.70)	44 (0.55)	42 (0.55)	42 (0.52)
Alcohol use	55 (0.50)	63 (0.44)	1 (0.86)	10 (0.80)	86 (0.33)	48 (0.51)	18 (0.66)	17 (0.67)	63 (0.46)
Alzheimer's disease	9 (0.71)	2 (0.82)	20 (0.66)	27 (0.62)	8 (0.73)	54 (0.49)	46 (0.54)	23 (0.64)	6 (0.73)
Arthritis	60 (0.49)	48 (0.53)	48 (0.51)	87 (0.25)	75 (0.41)	91 (0.26)	81 (0.35)	59 (0.44)	58 (0.47)
Artificial intelligence	88 (0.26)	86 (0.30)	95 (0.17)	96 (0.13)	93 (0.26)	69 (0.39)	97 (0.25)	75 (0.38)	90 (0.30)
Asteroid collision	97 (0.21)	94 (0.23)	100 (0.05)	99 (0.08)	94 (0.26)	83 (0.30)	85 (0.33)	99 (0.18)	95 (0.25)
Asthma	61 (0.46)	57 (0.48)	34 (0.57)	41 (0.55)	76 (0.41)	79 (0.32)	63 (0.44)	51 (0.49)	87 (0.35)
Bacterial infections	22 (0.64)	23 (0.63)	14 (0.74)	16 (0.75)	33 (0.56)	38 (0.55)	6 (0.71)	16 (0.67)	12 (0.70)
Benign tumors	87 (0.29)	81 (0.35)	82 (0.34)	84 (0.27)	91 (0.30)	77 (0.33)	92 (0.28)	86 (0.32)	82 (0.38)
Bicycle accidents	96 (0.21)	95 (0.21)	69 (0.43)	54 (0.49)	92 (0.29)	93 (0.23)	88 (0.31)	92 (0.29)	92 (0.28)
Biological terrorism	14 (0.68)	9 (0.72)	86 (0.30)	85 (0.27)	9 (0.73)	5 (0.83)	9 (0.70)	8 (0.74)	9 (0.71)
Birth defects	26 (0.63)	13 (0.70)	41 (0.54)	57 (0.47)	5 (0.74)	44 (0.54)	59 (0.45)	40 (0.55)	40 (0.53)
Blood disorders	33 (0.60)	25 (0.62)	39 (0.56)	31 (0.59)	37 (0.55)	67 (0.40)	50 (0.52)	50 (0.50)	26 (0.58)
Bone diseases	43 (0.56)	33 (0.60)	61 (0.47)	55 (0.48)	43 (0.53)	70 (0.39)	72 (0.40)	81 (0.34)	50 (0.51)
Cancer	1 (0.88)	1 (0.89)	2 (0.86)	2 (0.89)	3 (0.81)	32 (0.61)	3 (0.73)	14 (0.70)	1 (0.84)
Car accidents	48 (0.54)	37 (0.59)	4 (0.82)	5 (0.85)	25 (0.60)	40 (0.54)	13 (0.68)	34 (0.60)	10 (0.71)
Chemical spills	25 (0.63)	43 (0.57)	75 (0.40)	77 (0.34)	20 (0.63)	8 (0.79)	42 (0.56)	44 (0.53)	25 (0.58)
Child abuse	4 (0.80)	6 (0.76)	11 (0.77)	29 (0.59)	1 (0.88)	14 (0.71)	17 (0.67)	25 (0.63)	4 (0.76)
Choking	93 (0.23)	98 (0.18)	64 (0.45)	36 (0.56)	85 (0.34)	94 (0.22)	89 (0.30)	98 (0.21)	70 (0.44)

**Table S1.** Survey indices, by risk

Risk	Priority	Priority-margin	Harm	Mortality	Fairness	Responsibility	Disaster potential	Long-term growth	Worry
Climate change	38 (0.59)	53 (0.51)	79 (0.37)	89 (0.24)	78 (0.40)	28 (0.65)	61 (0.45)	11 (0.72)	46 (0.52)
Complications from pregnancy / childbirth	32 (0.60)	34 (0.60)	45 (0.53)	49 (0.50)	32 (0.56)	58 (0.45)	71 (0.40)	78 (0.37)	65 (0.45)
Construction accidents	69 (0.41)	84 (0.31)	55 (0.49)	46 (0.53)	73 (0.41)	52 (0.50)	64 (0.43)	69 (0.40)	85 (0.35)
Contaminated drinking water	5 (0.79)	5 (0.78)	23 (0.62)	61 (0.46)	4 (0.75)	3 (0.84)	2 (0.75)	26 (0.62)	8 (0.72)
Cyberattacks	17 (0.67)	21 (0.64)	42 (0.53)	90 (0.22)	34 (0.55)	4 (0.83)	28 (0.62)	3 (0.81)	19 (0.61)
Diabetes	11 (0.68)	8 (0.73)	12 (0.76)	12 (0.78)	40 (0.54)	47 (0.51)	30 (0.61)	13 (0.70)	18 (0.63)
Drought	52 (0.51)	52 (0.52)	53 (0.49)	81 (0.29)	42 (0.53)	49 (0.51)	25 (0.63)	24 (0.64)	48 (0.51)
Drownings	82 (0.33)	91 (0.26)	51 (0.50)	33 (0.58)	80 (0.39)	75 (0.34)	74 (0.39)	88 (0.31)	69 (0.45)
Drunk driving	23 (0.64)	24 (0.63)	7 (0.81)	7 (0.83)	6 (0.74)	30 (0.64)	4 (0.73)	32 (0.60)	5 (0.75)
Earthquakes	83 (0.33)	75 (0.38)	81 (0.34)	80 (0.31)	47 (0.51)	81 (0.31)	45 (0.55)	54 (0.47)	78 (0.40)
Epilepsy	67 (0.42)	51 (0.53)	74 (0.40)	66 (0.42)	58 (0.48)	89 (0.29)	91 (0.28)	96 (0.26)	83 (0.36)
Exposure to cold	86 (0.30)	88 (0.29)	76 (0.39)	74 (0.37)	88 (0.33)	80 (0.32)	80 (0.36)	91 (0.29)	93 (0.25)
Extraterrestrials	100 (0.10)	100 (0.12)	99 (0.06)	100 (0.05)	100 (0.12)	92 (0.24)	100 (0.13)	100 (0.12)	100 (0.10)
Extreme weather	81 (0.33)	73 (0.39)	36 (0.57)	39 (0.55)	74 (0.41)	76 (0.34)	16 (0.67)	9 (0.72)	27 (0.57)
Falling	94 (0.22)	96 (0.20)	37 (0.57)	37 (0.56)	96 (0.23)	99 (0.17)	82 (0.35)	93 (0.29)	74 (0.42)
Fire exposure / smoke inhalation	75 (0.39)	82 (0.34)	30 (0.59)	30 (0.59)	59 (0.47)	56 (0.47)	47 (0.53)	68 (0.40)	38 (0.54)
Firearms injuries	56 (0.50)	67 (0.41)	18 (0.67)	18 (0.71)	45 (0.52)	25 (0.66)	26 (0.63)	30 (0.61)	44 (0.52)
Floods	47 (0.54)	49 (0.53)	33 (0.58)	47 (0.53)	31 (0.56)	45 (0.53)	24 (0.63)	36 (0.59)	61 (0.47)
Food poisoning	72 (0.39)	70 (0.40)	59 (0.48)	58 (0.47)	55 (0.49)	43 (0.54)	65 (0.43)	76 (0.37)	64 (0.46)
Food shortage	7 (0.73)	4 (0.78)	60 (0.47)	59 (0.47)	14 (0.66)	10 (0.74)	8 (0.70)	22 (0.65)	43 (0.52)
Fungal infections	68 (0.41)	74 (0.39)	71 (0.42)	70 (0.41)	87 (0.33)	74 (0.35)	68 (0.41)	73 (0.39)	75 (0.41)
Gallbladder / pancreas disorders	71 (0.41)	58 (0.48)	50 (0.50)	50 (0.50)	66 (0.44)	86 (0.30)	83 (0.35)	84 (0.32)	59 (0.47)
Gang violence	8 (0.71)	18 (0.66)	19 (0.67)	14 (0.77)	12 (0.69)	11 (0.73)	11 (0.69)	15 (0.68)	15 (0.69)
Heart disease	2 (0.81)	3 (0.79)	6 (0.81)	3 (0.87)	17 (0.64)	36 (0.55)	1 (0.76)	10 (0.72)	3 (0.77)
Heat waves	91 (0.24)	87 (0.29)	67 (0.44)	56 (0.47)	90 (0.31)	87 (0.29)	37 (0.59)	27 (0.62)	79 (0.40)
Hepatitis	50 (0.53)	31 (0.61)	31 (0.58)	35 (0.57)	49 (0.50)	51 (0.50)	55 (0.48)	48 (0.51)	36 (0.54)

**Table S1 (continued).** Survey indices, by risk

<b>Risk</b>	<b>Priority</b>	<b>Priority-margin</b>	<b>Harm</b>	<b>Mortality</b>	<b>Fairness</b>	<b>Responsibility</b>	<b>Disaster potential</b>	<b>Long-term growth</b>	<b>Worry</b>
Hernias	98 (0.20)	97 (0.19)	78 (0.37)	86 (0.25)	98 (0.21)	100 (0.17)	99 (0.19)	97 (0.24)	96 (0.24)
High-energy physics experiments	95 (0.22)	78 (0.36)	94 (0.18)	93 (0.17)	95 (0.24)	62 (0.41)	94 (0.26)	85 (0.32)	98 (0.22)
HIV/AIDS	19 (0.67)	26 (0.62)	24 (0.62)	26 (0.62)	23 (0.61)	31 (0.63)	35 (0.59)	63 (0.43)	24 (0.60)
Homicides	15 (0.68)	12 (0.70)	15 (0.74)	9 (0.82)	10 (0.70)	17 (0.69)	10 (0.70)	12 (0.72)	13 (0.70)
Huntington's disease	74 (0.39)	55 (0.50)	85 (0.31)	75 (0.36)	54 (0.49)	78 (0.33)	95 (0.26)	87 (0.32)	86 (0.35)
Hurricanes	78 (0.35)	77 (0.36)	63 (0.45)	62 (0.45)	57 (0.49)	96 (0.22)	38 (0.58)	49 (0.51)	66 (0.45)
Illicit drug overdoses	34 (0.60)	38 (0.59)	9 (0.80)	4 (0.85)	65 (0.45)	29 (0.65)	19 (0.66)	4 (0.78)	45 (0.52)
Infant mortality	28 (0.61)	29 (0.61)	52 (0.50)	32 (0.58)	16 (0.65)	33 (0.58)	78 (0.36)	77 (0.37)	39 (0.53)
Influenza / pneumonia	29 (0.61)	32 (0.61)	22 (0.65)	22 (0.69)	60 (0.47)	39 (0.55)	7 (0.70)	39 (0.55)	34 (0.55)
Infrastructure collapse	16 (0.67)	39 (0.58)	84 (0.31)	79 (0.32)	38 (0.54)	12 (0.72)	34 (0.59)	28 (0.61)	30 (0.56)
Intestinal disorders	77 (0.39)	54 (0.50)	44 (0.53)	42 (0.54)	70 (0.42)	73 (0.36)	60 (0.45)	61 (0.44)	31 (0.56)
Kidney diseases	44 (0.55)	16 (0.67)	25 (0.61)	21 (0.69)	51 (0.50)	64 (0.41)	53 (0.50)	47 (0.51)	22 (0.60)
Land warfare	39 (0.59)	46 (0.55)	80 (0.35)	69 (0.41)	35 (0.55)	20 (0.68)	43 (0.56)	33 (0.60)	51 (0.50)
Landslides	80 (0.35)	89 (0.28)	89 (0.28)	78 (0.32)	82 (0.38)	68 (0.40)	66 (0.42)	65 (0.42)	89 (0.32)
Lethal force used by police	42 (0.58)	59 (0.48)	54 (0.49)	45 (0.53)	39 (0.54)	13 (0.71)	58 (0.45)	52 (0.49)	54 (0.49)
Liver diseases	53 (0.51)	44 (0.56)	28 (0.60)	20 (0.70)	67 (0.43)	60 (0.44)	56 (0.48)	38 (0.56)	20 (0.61)
Lung diseases	18 (0.67)	14 (0.68)	13 (0.75)	15 (0.75)	46 (0.51)	55 (0.48)	21 (0.65)	41 (0.55)	17 (0.64)
Lupus	62 (0.45)	56 (0.50)	73 (0.40)	71 (0.41)	52 (0.50)	88 (0.29)	87 (0.31)	82 (0.33)	84 (0.36)
Malnutrition	13 (0.68)	11 (0.71)	43 (0.53)	24 (0.65)	24 (0.60)	16 (0.70)	41 (0.57)	45 (0.53)	53 (0.50)
Medical errors / malpractice	12 (0.68)	30 (0.61)	26 (0.61)	23 (0.68)	7 (0.74)	27 (0.66)	36 (0.59)	43 (0.54)	14 (0.69)
Metabolic disorders	54 (0.51)	50 (0.53)	46 (0.51)	48 (0.51)	56 (0.49)	65 (0.40)	67 (0.41)	46 (0.52)	57 (0.47)
Motorcycle accidents	79 (0.35)	90 (0.27)	27 (0.60)	28 (0.59)	84 (0.36)	72 (0.36)	75 (0.38)	72 (0.39)	76 (0.41)
Multiple sclerosis	31 (0.60)	22 (0.63)	65 (0.45)	64 (0.44)	36 (0.55)	71 (0.37)	73 (0.39)	80 (0.34)	72 (0.43)
Nanotechnology	89 (0.26)	83 (0.33)	93 (0.19)	92 (0.19)	99 (0.21)	61 (0.43)	98 (0.23)	89 (0.30)	97 (0.23)
Naval warfare	76 (0.39)	66 (0.42)	91 (0.20)	88 (0.25)	79 (0.40)	22 (0.68)	57 (0.46)	67 (0.41)	73 (0.42)
Nuclear meltdowns	49 (0.53)	47 (0.55)	92 (0.19)	94 (0.17)	29 (0.58)	9 (0.78)	40 (0.58)	64 (0.43)	29 (0.56)
Nuclear war	21 (0.66)	27 (0.62)	96 (0.15)	98 (0.11)	11 (0.70)	1 (0.86)	5 (0.72)	31 (0.61)	7 (0.73)

**Table S1 (continued).** *Survey indices, by risk*

Risk	Priority	Priority-margin	Harm	Mortality	Fairness	Responsibility	Disaster potential	Long-term growth	Worry
Obesity	30 (0.61)	41 (0.58)	5 (0.82)	11 (0.78)	81 (0.39)	46 (0.52)	15 (0.67)	6 (0.76)	35 (0.54)
Opioid / heroin overdoses	27 (0.63)	28 (0.61)	10 (0.79)	6 (0.84)	68 (0.43)	18 (0.69)	20 (0.66)	2 (0.82)	32 (0.56)
Pandemics / plagues	37 (0.59)	35 (0.59)	88 (0.29)	82 (0.28)	15 (0.66)	19 (0.69)	22 (0.65)	37 (0.57)	23 (0.60)
Parkinson's disease	36 (0.60)	20 (0.65)	62 (0.46)	43 (0.54)	22 (0.61)	66 (0.40)	77 (0.36)	57 (0.45)	47 (0.51)
Pedestrian accidents	65 (0.43)	71 (0.40)	32 (0.58)	19 (0.70)	50 (0.50)	59 (0.45)	70 (0.40)	70 (0.40)	49 (0.51)
Pesticides	57 (0.50)	68 (0.40)	49 (0.50)	60 (0.46)	28 (0.58)	24 (0.66)	48 (0.53)	60 (0.44)	62 (0.46)
Poisoning	64 (0.44)	76 (0.38)	66 (0.45)	44 (0.54)	30 (0.57)	37 (0.55)	49 (0.53)	74 (0.38)	41 (0.52)
Post-traumatic stress disorder (PTSD)	10 (0.69)	15 (0.67)	21 (0.65)	34 (0.57)	18 (0.64)	23 (0.67)	54 (0.50)	21 (0.65)	55 (0.48)
Prescription drug overdoses	20 (0.66)	17 (0.66)	8 (0.81)	8 (0.83)	62 (0.45)	21 (0.68)	14 (0.67)	5 (0.77)	28 (0.57)
Rioting	70 (0.41)	72 (0.40)	70 (0.43)	67 (0.42)	27 (0.59)	26 (0.66)	52 (0.50)	20 (0.66)	52 (0.50)
Second-hand smoke exposure	66 (0.42)	64 (0.43)	29 (0.60)	25 (0.64)	13 (0.67)	34 (0.57)	51 (0.51)	53 (0.48)	71 (0.44)
Smoking	45 (0.55)	61 (0.45)	3 (0.82)	1 (0.89)	72 (0.42)	35 (0.56)	27 (0.62)	58 (0.45)	68 (0.45)
Solar flares	92 (0.24)	93 (0.23)	97 (0.14)	95 (0.13)	97 (0.22)	82 (0.31)	86 (0.32)	79 (0.37)	94 (0.25)
Spinal diseases	51 (0.52)	42 (0.57)	77 (0.38)	73 (0.39)	61 (0.45)	63 (0.41)	84 (0.34)	90 (0.29)	67 (0.45)
Stomach diseases	59 (0.49)	62 (0.44)	40 (0.55)	38 (0.55)	69 (0.42)	84 (0.30)	62 (0.44)	55 (0.47)	37 (0.54)
Strokes	35 (0.60)	19 (0.66)	16 (0.71)	17 (0.74)	26 (0.59)	57 (0.46)	31 (0.61)	29 (0.61)	11 (0.71)
Suicides	41 (0.58)	40 (0.58)	17 (0.70)	13 (0.77)	71 (0.42)	53 (0.50)	33 (0.59)	19 (0.66)	33 (0.55)
Terrorism	3 (0.80)	7 (0.75)	58 (0.48)	51 (0.50)	2 (0.84)	2 (0.85)	12 (0.69)	1 (0.84)	2 (0.78)
Thyroid disorders	63 (0.45)	69 (0.40)	57 (0.48)	68 (0.42)	77 (0.41)	90 (0.28)	90 (0.30)	62 (0.44)	80 (0.40)
Tornadoes	84 (0.31)	80 (0.35)	47 (0.51)	53 (0.49)	41 (0.53)	97 (0.21)	39 (0.58)	56 (0.46)	60 (0.47)
Train accidents	73 (0.39)	79 (0.36)	83 (0.34)	76 (0.34)	64 (0.45)	50 (0.51)	76 (0.38)	94 (0.28)	91 (0.30)
Tsunamis	90 (0.25)	92 (0.24)	90 (0.22)	91 (0.20)	53 (0.50)	85 (0.30)	79 (0.36)	71 (0.39)	88 (0.34)
Urinary disorders	85 (0.31)	85 (0.31)	72 (0.42)	72 (0.40)	89 (0.32)	95 (0.22)	93 (0.27)	83 (0.33)	77 (0.41)
Volcanic eruptions	99 (0.19)	99 (0.14)	98 (0.12)	97 (0.12)	83 (0.37)	98 (0.20)	96 (0.25)	95 (0.28)	99 (0.21)
Warfare	24 (0.63)	36 (0.59)	68 (0.44)	52 (0.49)	19 (0.63)	7 (0.80)	29 (0.61)	18 (0.67)	21 (0.61)
Wildfires	40 (0.59)	45 (0.56)	56 (0.49)	65 (0.43)	44 (0.52)	42 (0.54)	32 (0.60)	35 (0.60)	56 (0.48)
Workplace accidents	58 (0.50)	60 (0.47)	35 (0.57)	40 (0.55)	63 (0.45)	41 (0.54)	69 (0.41)	66 (0.41)	81 (0.38)

**Table S1 (continued).** *Survey indices, by risk*

Rank	Priority	Priority-margin	Harm	Perceived Mortality	Actual Mortality
1	Cancer	Cancer	Alcohol use	Smoking	Heart disease
2	Heart disease	Alzheimer's disease	Cancer	Cancer	Cancer
3	Terrorism	Heart disease	Smoking	Heart disease	Smoking
4	Child abuse	Food shortage	Car accidents	Illicit drugs	Lung diseases
5	Contam. drinking water	Contam. drinking water	Obesity	Car accidents	Medical errors
6	Air pollution	Child abuse	Heart disease	Opioids / heroin	Air pollution
7	Food shortage	Terrorism	Drunk driving	Drunk driving	Strokes
8	Gang violence	Diabetes	Prescription drugs	Prescription drugs	Alzheimer's disease
9	Alzheimer's disease	Biological terrorism	Illicit drugs	Homicides	Diabetes
10	PTSD	Air pollution	Opioids / heroin	Alcohol use	Flu / pneumonia
11	Diabetes	Malnutrition	Child abuse	Obesity	Kidney diseases
12	Medical errors	Homicides	Diabetes	Diabetes	Liver diseases
13	Malnutrition	Birth defects	Lung diseases	Suicides	Poisoning
14	Biological terrorism	Lung diseases	Bacterial infections	Gang violence	Suicides
15	Homicides	PTSD	Homicides	Lung diseases	Alcohol use
16	Infrastructure collapse	Kidney diseases	Strokes	Bacterial infections	Bacterial infections
17	Cyberattacks	Prescription drugs	Suicides	Strokes	2nd-hand smoke
18	Lung diseases	Gang violence	Firearms injuries	Firearms injuries	Firearms injuries
19	HIV/AIDS	Strokes	Gang violence	Pedest. accidents	Falling
20	Prescription drugs	Parkinson's disease	Alzheimer's disease	Liver diseases	Opioids / heroin
21	Nuclear war	Cyberattacks	PTSD	Kidney diseases	Intestinal disorders
22	Bacterial infections	Multiple sclerosis	Flu / pneumonia	Flu / pneumonia	Prescription drugs
23	Drunk driving	Bacterial infections	Contam. drinking water	Medical errors	Parkinson's disease
24	Warfare	Drunk driving	HIV/AIDS	Malnutrition	Metabolic disorders
25	Chemical spills	Blood disorders	Kidney diseases	2nd-hand smoke	Infant mortality
26	Birth defects	HIV/AIDS	Medical errors	HIV/AIDS	Illicit drugs
27	Opioids / heroin	Nuclear war	Motorcycle accidents	Alzheimer's disease	Car accidents
28	Infant mortality	Opioids / heroin	Liver diseases	Motorcycle accidents	Homicides

**Table S2 (continued).** Risk rankings, by index

<b>Rank</b>	<b>Priority</b>	<b>Priority-margin</b>	<b>Harm</b>	<b>Perceived Mortality</b>	<b>Actual Mortality</b>
29	Flu / pneumonia	Infant mortality	2nd-hand smoke	Child abuse	Urinary disorders
30	Obesity	Medical errors	Fire / smoke	Fire / smoke	Birth defects
31	Multiple sclerosis	Hepatitis	Hepatitis	Blood disorders	Drunk driving
32	Pregnancy / childbirth	Flu / pneumonia	Pedest. accidents	Infant mortality	Gall./panc. disorder
33	Blood disorders	Bone diseases	Floods	Drownings	Blood disorders
34	Illicit drugs	Pregnancy / childbirth	Asthma	PTSD	Hepatitis
35	Strokes	Pandemics / plagues	Work. accidents	Hepatitis	Obesity
36	Parkinson's disease	Warfare	Extreme weather	Choking	Pedest. accidents
37	Pandemics / plagues	Car accidents	Falling	Falling	HIV/AIDS
38	Climate change	Illicit drugs	Air pollution	Stomach diseases	Stomach diseases
39	Land warfare	Infrastructure collapse	Blood disorders	Extreme weather	Malnutrition
40	Wildfires	Suicides	Stomach diseases	Work. accidents	Work. accidents
41	Suicides	Obesity	Birth defects	Asthma	Choking
42	Lethal force by police	Spinal diseases	Cyberattacks	Intestinal disorders	Motorcycles
43	Bone diseases	Chemical spills	Malnutrition	Parkinson's disease	Multiple sclerosis
44	Kidney diseases	Liver diseases	Intestinal disorders	Poisoning	Asthma
45	Smoking	Wildfires	Pregnancy / childbirth	Lethal force by police	Drownings
46	Air warfare	Land warfare	Metabolic disorders	Construction accidents	Lupus
47	Floods	Nuclear meltdowns	Tornadoes	Floods	Food poisoning
48	Car accidents	Arthritis	Arthritis	Metabolic disorders	Bone diseases
49	Nuclear meltdowns	Floods	Pesticides	Pregnancy / childbirth	Arthritis
50	Hepatitis	Metabolic disorders	Gall./panc. disorder	Gall./panc. disorder	Fire / smoke
51	Spinal diseases	Epilepsy	Drownings	Terrorism	Gang violence
52	Drought	Drought	Infant mortality	Warfare	Epilepsy
53	Liver diseases	Climate change	Drought	Tornadoes	Hernias
54	Metabolic disorders	Intestinal disorders	Lethal force by police	Bicycle accidents	Thyroid disorders
55	Alcohol use	Huntington's disease	Construction accidents	Bone diseases	Child abuse
56	Firearms injuries	Lupus	Wildfires	Heat waves	Benign tumors

**Table S2 (continued).** *Risk rankings, by index*

<b>Rank</b>	<b>Priority</b>	<b>Priority-margin</b>	<b>Harm</b>	<b>Perceived Mortality</b>	<b>Actual Mortality</b>
57	Pesticides	Asthma	Thyroid disorders	Birth defects	Spinal diseases
58	Work. accidents	Gall./panc. disorder	Terrorism	Food poisoning	Extreme weather
59	Stomach diseases	Lethal force by police	Food poisoning	Food shortage	PTSD
60	Arthritis	Work. accidents	Food shortage	Pesticides	Pregnancy / childbirth
61	Asthma	Smoking	Bone diseases	Contam. drinking water	Hungtn's disease
62	Lupus	Stomach diseases	Parkinson's disease	Hurricanes	Fungal infections
63	Thyroid disorders	Alcohol use	Hurricanes	Air pollution	Bicycle accidents
64	Poisoning	2nd-hand smoke	Choking	Multiple sclerosis	Lethal force by police
65	Pedest. accidents	Air warfare	Multiple sclerosis	Wildfires	Constr. accidents
66	2nd-hand smoke	Naval warfare	Poisoning	Epilepsy	Exposure to cold
67	Epilepsy	Firearms injuries	Heat waves	Rioting	Heat waves
68	Fungal infections	Pesticides	Warfare	Thyroid disorders	Chemical spills
69	Constr. accidents	Thyroid disorders	Bicycle accidents	Land warfare	Contam. drinking water
70	Rioting	Food poisoning	Rioting	Fungal infections	Floods
71	Gall./panc. disorder	Pedest. accidents	Fungal infections	Lupus	Hurricanes
72	Food poisoning	Rioting	Urinary disorders	Urinary disorders	Tornadoes
73	Train accidents	Extreme weather	Lupus	Spinal diseases	Terrorism
74	Hungtn's disease	Fungal infections	Epilepsy	Exposure to cold	Warfare (T74)
75	Fire / smoke	Earthquakes	Chemical spills	Hungtn's disease	Train accidents (T74)
76	Naval warfare	Poisoning	Exposure to cold	Train accidents	Air warfare
77	Intestinal disorders	Hurricanes	Spinal diseases	Chemical spills	Landslides (T77)
78	Hurricanes	High-energy physics	Hernias	Landslides	Earthquakes (T77)
79	Motorcycles	Train accidents	Climate change	Infr. collapse	Wildfires
80	Landslides	Tornadoes	Land warfare	Earthquakes	Land warfare
81	Extreme weather	Benign tumors	Earthquakes	Drought	Pesticides (T81)
82	Drownings	Fire / smoke	Benign tumors	Pandemics / plagues	Naval warfare (T81)
83	Earthquakes	Nanotechnology	Train accidents	Air warfare	Volcanic eruptions (T83)
84	Tornadoes	Constr. accidents	Infr. collapse	Benign tumors	Tsunamis (T83)

**Table S2 (continued).** *Risk rankings, by index*



<b>Rank</b>	<b>Priority</b>	<b>Priority-margin</b>	<b>Harm</b>	<b>Perceived Mortality</b>	<b>Actual Mortality</b>
85	Urinary disorders	Urinary disorders	Hungtn's disease	Bio. terrorism	Solar flares (T83)
86	Exposure to cold	Art. intelligence	Bio. terrorism	Hernias	Rioting (T83)
87	Benign tumors	Heat waves	Air warfare	Arthritis	Pandemics / plagues (T83)
88	Art. intelligence	Exposure to cold	Pandemics / plagues	Naval warfare	Nuclear war (T83)
89	Nanotechnology	Landslides	Landslides	Climate change	Nuclear meltdowns (T83)
90	Tsunamis	Motorcycles	Tsunamis	Cyberattacks	Nanotechnology (T83)
91	Heat waves	Drownings	Naval warfare	Tsunamis	Infr. collapse (T83)
92	Solar flares	Tsunamis	Nuclear meltdowns	Nanotechnology	High-energy physics (T83)
93	Choking	Solar flares	Nanotechnology	High-energy physics	Food shortage (T83)
94	Falling	Asteroid collision	High-energy physics	Nuclear meltdowns	Extraterrestrials (T83)
95	High-energy physics	Bicycle accidents	Art. intelligence	Solar flares	Drought (T83)
96	Bicycle accidents	Falling	Nuclear war	Art. intelligence	Cyberattacks (T83)
97	Asteroid collision	Hernias	Solar flares	Volcanic eruptions	Climate change (T83)
98	Hernias	Choking	Volcanic eruptions	Nuclear war	Bio. Terrorism (T83)
99	Volcanic eruptions	Volcanic eruptions	Extraterrestrials	Asteroid collision	Asteroid collision (T83)
100	Extraterrestrials	Extraterrestrials	Asteroid collision	Extraterrestrials	Art. Intelligence (T83)

<b>Rank</b>	<b>Fairness</b>	<b>Responsibility</b>	<b>Long-term growth</b>	<b>Disaster potential</b>	<b>Worry</b>
1	Child abuse	Nuclear war	Terrorism	Heart disease	Cancer
2	Terrorism	Terrorism	Opioids / heroin	Contam. drinking water	Terrorism
3	Cancer	Contam. drinking water	Cyberattacks	Cancer	Heart disease
4	Contam. drinking water	Cyberattacks	Illicit drugs	Drunk driving	Child abuse
5	Birth defects	Bio. terrorism	Prescription drugs	Nuclear war	Drunk driving
6	Drunk driving	Air pollution	Obesity	Bacterial infections	Alzheimer's disease
7	Medical error	Warfare	Air pollution	Flu / pneumonia	Nuclear war

**Table S2 (continued).** *Risk rankings, by index*

<b>Rank</b>	<b>Fairness</b>	<b>Responsibility</b>	<b>Long-term growth</b>	<b>Disaster potential</b>	<b>Worry</b>
8	Alzheimer's disease	Chemical spills	Bio. terrorism	Food shortage	Contam. drinking water
9	Bio. terrorism	Nuclear meltdowns	Extreme weather	Bio. terrorism	Bio. terrorism
10	Homicides	Food shortage	Heart disease	Homicides	Car accidents
11	Nuclear war	Gang violence	Climate change	Gang violence	Strokes
12	Gang violence	Infr. collapse	Homicides	Terrorism	Bacterial infections
13	2nd-hand smoke	Lethal force by police	Diabetes	Car accidents	Homicides
14	Food shortage	Child abuse	Cancer	Prescription drugs	Medical error
15	Pandemics / plagues	Air warfare	Gang violence	Obesity	Gang violence
16	Infant mortality	Malnutrition	Bacterial infections	Extreme weather	Air pollution
17	Heart disease	Homicides	Alcohol use	Child abuse	Lung diseases
18	PTSD	Opioids / heroin	Warfare	Alcohol use	Diabetes
19	Warfare	Pandemics / plagues	Suicides	Illicit drugs	Cyberattacks
20	Chemical spills	Land warfare	Rioting	Opioids / heroin	Liver diseases
21	Air pollution	Prescription drugs	PTSD	Lung diseases	Warfare
22	Parkinson's disease	Naval warfare	Food shortage	Pandemics / plagues	Kidney diseases
23	HIV/AIDS	PTSD	Alzheimer's disease	Air pollution	Pandemics / plagues
24	Malnutrition	Pesticides	Drought	Floods	HIV/AIDS
25	Car accidents	Firearms injuries	Child abuse	Drought	Chemical spills
26	Strokes	Rioting	Contam. drinking water	Firearms injuries	Blood disorders
27	Rioting	Medical error	Heat waves	Smoking	Extreme weather
28	Pesticides	Climate change	Infr. collapse	Cyberattacks	Prescription drugs
29	Nuclear meltdowns	Illicit drugs	Strokes	Warfare	Nuclear meltdowns
30	Poisoning	Drunk driving	Firearms injuries	Diabetes	Infr. collapse
31	Floods	HIV/AIDS	Nuclear war	Strokes	Intestinal disorders
32	Pregnancy / childbirth	Cancer	Drunk driving	Wildfires	Opioids / heroin
33	Bacterial infections	Infant mortality	Land warfare	Suicides	Suicides
34	Cyberattacks	2nd-hand smoke	Car accidents	Infr. collapse	Flu / pneumonia
35	Land warfare	Smoking	Wildfires	HIV/AIDS	Obesity

**Table S2 (continued).** *Risk rankings, by index*

<b>Rank</b>	<b>Fairness</b>	<b>Responsibility</b>	<b>Long-term growth</b>	<b>Disaster potential</b>	<b>Worry</b>
36	Multiple sclerosis	Heart disease	Floods	Medical error	Hepatitis
37	Blood disorders	Poisoning	Pandemics / plagues	Heat waves	Stomach diseases
38	Infr. collapse	Bacterial infections	Liver diseases	Hurricanes	Fire / smoke
39	Lethal force by police	Flu / pneumonia	Flu / pneumonia	Tornadoes	Infant mortality
40	Diabetes	Car accidents	Birth defects	Nuclear meltdowns	Birth defects
41	Tornadoes	Work. accidents	Lung diseases	Malnutrition	Poisoning
42	Drought	Wildfires	Air warfare	Chemical spills	Air warfare
43	Bone diseases	Food poisoning	Medical error	Land warfare	Food shortage
44	Wildfires	Birth defects	Chemical spills	Air warfare	Firearms injuries
45	Firearms injuries	Floods	Malnutrition	Earthquakes	Illicit drugs
46	Lung diseases	Obesity	Metabolic disorders	Alzheimer's disease	Climate change
47	Earthquakes	Diabetes	Kidney diseases	Fire / smoke	Parkinson's disease
48	Air warfare	Alcohol use	Hepatitis	Pesticides	Drought
49	Hepatitis	Drought	Hurricanes	Poisoning	Pedest. accidents
50	Pedest. accidents	Train accidents	Blood disorders	Blood disorders	Bone diseases
51	Kidney diseases	Hepatitis	Asthma	2nd-hand smoke	Land warfare
52	Lupus	Constr. accidents	Lethal force by police	Rioting	Rioting
53	Tsunamis	Suicides	2nd-hand smoke	Kidney diseases	Malnutrition
54	Hungtn's disease	Alzheimer's disease	Earthquakes	PTSD	Lethal force by police
55	Food poisoning	Lung diseases	Stomach diseases	Hepatitis	PTSD
56	Metabolic disorders	Fire / smoke	Tornadoes	Liver diseases	Wildfires
57	Hurricanes	Strokes	Parkinson's disease	Naval warfare	Metabolic disorders
58	Epilepsy	Pregnancy / childbirth	Smoking	Lethal force by police	Arthritis
59	Fire / smoke	Pedest. accidents	Arthritis	Birth defects	Gall./panc. disorder
60	Flu / pneumonia	Liver diseases	Pesticides	Intestinal disorders	Tornadoes
61	Spinal diseases	Nanotechnology	Intestinal disorders	Climate change	Floods
62	Prescription drugs	High-energy physics	Thyroid disorders	Stomach diseases	Pesticides
63	Work. accidents	Spinal diseases	HIV/AIDS	Asthma	Alcohol use

**Table S2 (continued).** Risk rankings, by index

Rank	Fairness	Responsibility	Long-term growth	Disaster potential	Worry
64	Train accidents	Kidney diseases	Nuclear meltdowns	Constr. accidents	Food poisoning
65	Illicit drugs	Metabolic disorders	Landslides	Food poisoning	Pregnancy / childbirth
66	Gall./panc. disorder	Parkinson's disease	Work. accidents	Landslides	Hurricanes
67	Liver diseases	Blood disorders	Naval warfare	Metabolic disorders	Spinal diseases
68	Opioids / heroin	Landslides	Fire / smoke	Fungal infections	Smoking
69	Stomach diseases	Art. intelligence	Constr. accidents	Work. accidents	Drownings
70	Intestinal disorders	Bone diseases	Pedest. accidents	Pedest. accidents	Choking
71	Suicides	Multiple sclerosis	Tsunamis	Pregnancy / childbirth	2nd-hand smoke
72	Smoking	Motorcycles	Motorcycles	Bone diseases	Multiple sclerosis
73	Constr. accidents	Intestinal disorders	Fungal infections	Multiple sclerosis	Naval warfare
74	Extreme weather	Fungal infections	Poisoning	Drownings	Falling
75	Arthritis	Drownings	Art. intelligence	Motorcycles	Fungal infections
76	Asthma	Extreme weather	Food poisoning	Train accidents	Motorcycles
77	Thyroid disorders	Benign tumors	Infant mortality	Parkinson's disease	Urinary disorders
78	Climate change	Hungtn's disease	Pregnancy / childbirth	Infant mortality	Earthquakes
79	Naval warfare	Asthma	Solar flares	Tsunamis	Heat waves
80	Drownings	Exposure to cold	Multiple sclerosis	Exposure to cold	Thyroid disorders
81	Obesity	Earthquakes	Bone diseases	Arthritis	Work. accidents
82	Landslides	Solar flares	Lupus	Falling	Benign tumors
83	Volcanic eruptions	Asteroid collision	Urinary disorders	Gall./panc. disorder	Epilepsy
84	Motorcycles	Stomach diseases	Gall./panc. disorder	Spinal diseases	Lupus
85	Choking	Tsunamis	High-energy physics	Asteroid collision	Constr. accidents
86	Alcohol use	Gall./panc. disorder	Benign tumors	Solar flares	Hungtn's disease
87	Fungal infections	Heat waves	Hungtn's disease	Lupus	Asthma
88	Exposure to cold	Lupus	Drownings	Bicycle accidents	Tsunamis
89	Urinary disorders	Epilepsy	Nanotechnology	Choking	Landslides
90	Heat waves	Thyroid disorders	Spinal diseases	Thyroid disorders	Art. intelligence
91	Benign tumors	Arthritis	Exposure to cold	Epilepsy	Train accidents

**Table S2 (continued).** Risk rankings, by index

<b>Rank</b>	<b>Fairness</b>	<b>Responsibility</b>	<b>Long-term growth</b>	<b>Disaster potential</b>	<b>Worry</b>
92	Bicycle accidents	Extraterrestrials	Bicycle accidents	Benign tumors	Bicycle accidents
93	Art. intelligence	Bicycle accidents	Falling	Urinary disorders	Exposure to cold
94	Asteroid collision	Choking	Train accidents	High-energy physics	Solar flares
95	High-energy physics	Urinary disorders	Volcanic eruptions	Hungtn's disease	Asteroid collision
96	Falling	Hurricanes	Epilepsy	Volcanic eruptions	Hernias
97	Solar flares	Tornadoes	Hernias	Art. intelligence	Nanotechnology
98	Hernias	Volcanic eruptions	Choking	Nanotechnology	High-energy physics
99	Nanotechnology	Falling	Asteroid collision	Hernias	Volcanic eruptions
100	Extraterrestrials	Hernias	Extraterrestrials	Extraterrestrials	Extraterrestrials

**Table S2 (continued).** *Risk rankings, by index*

## **Section 2. Survey administration**

This section describes power calculations; respondent recruitment; survey demographics; data management; and the calculation of survey weights.

### *Power calculation*

A sample size of 3,000 respondents was chosen based on the goal of estimating survey indices within a 5 percentage-point margin of error. Assuming that the standard deviation in the indices was 0.20,<sup>1</sup> this required 126 observations per attribute, per risk. With 100 risks in the data set, that required 12,600 observations per attribute. Since each pairwise comparison provides information about two risks, this equated to a target of 6,300 pairwise comparisons per attribute in the study. With nine attributes in the study, this generated a requirement of 56,700 pairwise comparisons.

A sample size of 945 respondents was thus expected to provide enough data to detect whether a sample average deviated from a test value by 0.05, with  $p < 0.05\%$  and 80% power. As described in the paper, however, it is important to examine responses within subgroups of the data, and not just for the entire set of respondents on the whole. Recruiting a total of 2,835 respondents would allow for dividing the data set into terciles (e.g., Republicans/Independents/Democrats) while retaining target levels of statistical power within each subgroup. Raising this figure to 3,000 provided a cushion for variance that was higher than expected.

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<sup>1</sup> This expectation was accurate: the standard deviations for the nine indices gathered by the survey ranged from 0.15 to 0.21.

### *Respondent recruitment*

Qualtrics administered the survey online between June 28 and July 16, 2017. Qualtrics recruits panel members through various sources, including website intercept recruitment, member referrals, targeted email lists, gaming sites, customer loyalty web portals, permission-based networks, and social media. Panel members' names, addresses, and dates of birth are typically validated via third-party verification measures. Panelists' incentives vary by method of recruitment: these include frequent flyer miles, retail points, cash, and gift cards. Once respondents join the Qualtrics panel, they receive email invitations to take surveys. The typical survey invitation is simple and generic, containing a hyperlink along with a description of the offered incentive. The average response rate for these survey invitations generally falls between 5%-12%. Respondents for this survey were recruited using quotas for age, region, gender, and race. See further information on respondent demographics below.

### *Survey demographics*

- *Gender*: 1,502 (50%) Female; 1,493 (49%) Male; 5 (0.2%) Other.
- *Party*: 1,085 (36%) Democrat; 863 (29%) Independent; 810 (27%) Republican; 242 (8%) Other. Among respondents who identified as Independents, 28% said they leaned towards the Democratic party and 27 percent said they leaned towards the Republican party. Among respondents who identified as Democrats, 60% said they identified as “strong Democrats.” Among respondents who identified as Republicans, 51% said they identified as “strong Republicans.”
- *Race*: 361 (13%) Black; 468 (16%) Hispanic; 1,771 (62%) Non-Hispanic White.

- *Age:* 324 (11%) 18-24; 531 (18%) 25-34; 517 (17%) 35-44; 573 (19%) 45-54; 507 (17%) 55-64; 448 (15%) 65-74; 92 (3%) 75-84; 8 (0.3%) 85 or older.
- *Highest Level of Education Completed:* 52 (2%) Less than High School; 409 (14%) High School / GED; 637 (21%) Some College; 311 (10%) 2-year College Degree; 937 (31%) 4-year College Degree; 495 (17%) Master's Degree; 86 (3%) Professional Degree (JD, MD); 73 (2%) Doctoral Degree.
- *Income:* 495 (17%) Less than \$30,000; 248 (8%) \$30,000-39,999; 240 (8%) \$40,000-49,999; 285 (10%) \$50,000-59,999; 188 (6%) \$60,000-69,999; 221 (7%) \$70,000-79,999; 176 (6%) \$80,000-89,999; 216 (7%) \$90,000-99,999; 690 (23%) \$100,000 or more; 241 (8%) Prefer not to say.

### *Data management*

3,129 respondents finished the survey. This number excludes respondents who were over quota, “speeders” who finished the survey in less than one-third of the median completion time, as well as 111 respondents who failed an attention check described below. Thirty-five observations were then deleted because they involved identical IP addresses to other respondents, and thus represented potential repeat survey-takers. Then 52 observations were deleted because respondents did not record their location using a valid 5-digit ZIP code. Then the 32 fastest survey times were dropped from the sample in order to reach the target of 3,000 respondents.



	<i>Actual number of respondents</i>	<i>Margins used to set survey weights</i>
<i>Gender</i>		
Female	1,502	1,522
Male	1,493	1,473
Other*	5	5
<i>Race</i>		
Non-Hispanic White	1,771	1,917
Black or African-American	361	392
Hispanic	468	490
Other	264	201
<i>Age</i>		
18-24	321	392
25-44	1,038	1051
45-64	1,086	1042
65 and over	555	515
<i>Highest level of education completed</i>		
Not a 4-year college	1,409	2,079
4-year college	937	585
Graduate degree	654	336
<i>Household income</i>		
\$39,999 or less	743	807
\$40,000-\$89,999	1,110	929
\$90,000 or more	906	1023
Prefer not to say <sup>†</sup>	241	241
<i>Census division</i>		
New England	143	141
Middle Atlantic	399	392
East North Central	438	435
West North Central	183	195
South Atlantic	644	601
East South Central	157	176
West South Central	335	353
Mountain	200	217
Pacific	501	490
<i>Party</i>		
Republican	810	1,000
Independent/Other	905	1,000
Democrat	1,085	1,000

\* Since the U.S. census does not track “other” as a category for gender, the 5 respondents who selected this option were not assigned a special weight on this dimension. † Respondents who opted not to report their household income were not assigned a special weight on this dimension.

**Table S3.** *Comparison of survey sample to weighting margins*

### *Estimating survey weights*

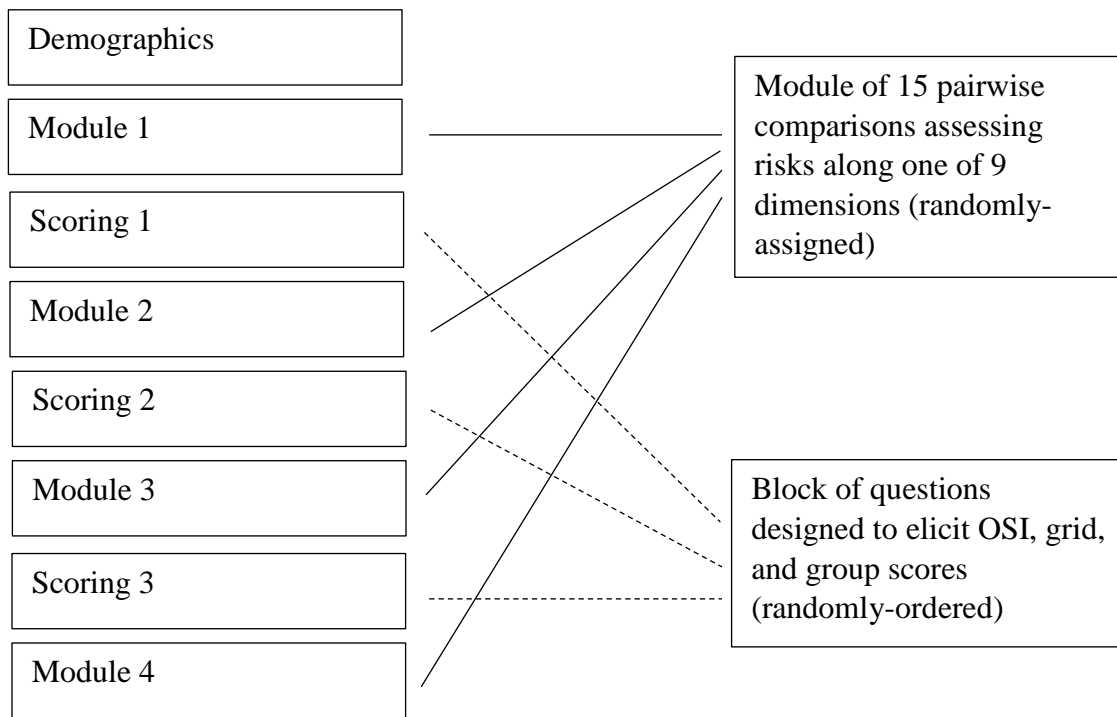
Survey weights were calculated by raking on the following dimensions: *gender* (female, male); *race* (Non-Hispanic white, black or African-American, Hispanic, other); *age* (18-24, 25-44, 45-64, 65 and over); highest level of *education* completed (Not a 4-year college; 4-year college; graduate degree); *household income* (\$39,999 or less, \$40,000-\$89,999, \$90,000 or above); *census division* (New England, Middle Atlantic, East North Central, West North Central, South Atlantic, East South Central, West South Central, Mountain, Pacific), and *party* (Republican, Independent, Democrat). This procedure produced survey weights with a mean of 1.00, a standard deviation of 0.60, a minimum of 0.16 and a maximum of 3.75. Marginal proportions for all categories save party were based on data from the 2010 U.S. census regarding persons age 18 and over. Party margins were set equally. Table S3 compares sample characteristics to the margins used for calculating sample weights.

### **Section 3. Survey instrument**

Following the consent form, the survey consisted of eight blocks. Respondents began by providing demographic information. Then they completed four modules of 15 pairwise comparisons apiece. Each module pertained to one randomly-selected dimension of assessment. Since module assignment was randomized, some respondents completed the same module multiple times (but

with different, randomly-assigned pairs of risks). Since pairwise comparisons were randomly-assigned, there was no guarantee that respondents ever saw the same pair of risks in two modules.<sup>2</sup>

Interspersed among modules, respondents completed batteries of questions designed to elicit ordinary science intelligence (OSI), “grid” ideology, and “group” ideology.<sup>3</sup> Those three sets of questions were themselves presented in random order. Figure S1 summarizes the overall survey flow. The survey’s median completion time was 758 seconds (12.6 minutes).



**Figure S1.** *Survey flow*

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<sup>2</sup> With 4,950 possible risk pairs, the probability of seeing a given pair multiple times in the survey was 1.2%.

<sup>3</sup> See [www.culturalcognition.net](http://www.culturalcognition.net) for documentation and Kahan (2015, 2017) for discussion and instruments. These questions were translated into indices by way of principal factor analysis.

*Demographic questions*

- What is your gender [Female / Male]
- Do you consider yourself to be of Hispanic, Latino, or Spanish origin? [Yes / No]
- Which one or more of the following groups would you say is your race? [American Indian or Alaska Native / Asian / Black or African American / Native Hawaiian or Other Pacific Islander / White / Other]
- What is your 5-digit ZIP code? [text entry]
- Generally speaking, do you think of yourself as a Republican, a Democrat, an Independent, or some other political party? [Democrat / Republican / Independent / Other]
  - [If Republican is selected] Would you say that you are a... [Strong Republican / Not a strong Republican]
  - [If Democrat is selected] Would you say that you are a... [Strong Democrat / Not a strong Democrat]
  - [If Independent is selected] Do you consider yourself to be closer to the Democratic Party or to the Republican Party [Democratic Party / Republican Party / Neither]
- What is the highest level of education that you have completed? [Less than High School / High School/GED / Some College / 2-year College Degree / 4-year College Degree / Master's Degree / Doctoral Degree / Professional Degree (JD, MD)]
- Please select blue from the following list [Red / Yellow / Blue<sup>4</sup> / Green]

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<sup>4</sup> Respondents who did not select this option were automatically removed from the survey.

The next page of the survey asks you to compare two risks at a time. In each case, you will be asked: **Which of these risks should the U.S. government spend more total money to reduce?**

Please note that this question asks you to focus on spending by the U.S. federal government in particular, and not the governments of individual cities or states.

To show that you understand these instructions, please indicate which risks we want you to select on the following page.

Which risk is more confusing

Which risk the U.S. government should spend less total money to reduce

Which risk affects more teenagers

Which risk the U.S. government should spend more total money to reduce

Which risk is most problematic

The next page of the survey asks you to compare two risks at a time. In each case, you will be asked: **Which of these risks is more unfair to the people it harms?**

To show that you understand these instructions, please indicate which risks we want you to select on the following page.

Which risks affect more teenagers

Which risks are less unfair to the people they harm

Which risks are more problematic

Which risks are more unfair to the people they harm

Which risks are harder to understand



**Figure S2.** *Examples of pairwise comparison instruction screens*

Which of these risks killed more Americans last year?

Warfare

Spinal diseases

Which of these risks is more unfair to the people it harms?

Gallbladder / pancreas disorders

Nuclear war

Which of these risks killed more Americans last year?

Food shortage

Extreme weather

Which of these risks is more unfair to the people it harms?

Wildfires

Hurricanes

Which of these risks killed more Americans last year?

Suicides

Prescription drug overdoses

Which of these risks is more unfair to the people it harms?

Artificial intelligence

Hepatitis

Which of these risks killed more Americans last year?

Lupus

Epilepsy

Which of these risks is more unfair to the people it harms?

Rioting

Pesticides

Which of these risks killed more Americans last year?

Epilepsy

Medical errors / malpractice

Which of these risks is more unfair to the people it harms?

Birth defects

Infant mortality



**Figure S2 (continued).** *Examples of pairwise comparison screens*

- What is your combined annual household income? [Less than 30,000 / 30,000-39,999 / 40,000-49,999 / 50,000-59,999 / 60,000-69,999 / 70,000-79,999 / 80,000-89,999 / 90,000-99,999 / 100,000 or more / Prefer not to say]
- How old are you? [Under 18<sup>5</sup> / 18-24 / 25-34 / 35-44 / 45-54 / 55-64 / 65-74 / 75-84 / 85 or older. Respondents who selected “Under 18” were removed from the survey/]

### *Pairwise comparisons*

[Each module of pairwise comparisons began with a screen instructing respondents how to make pairwise comparisons, and then confirming that they understood those instructions. Respondents were not allowed to advance screens until they correctly acknowledged these instructions by choosing one of five randomly-ordered options. Respondents then proceeded to complete three screens that each contained five randomly-selected pairwise comparisons. Figure S2 provides examples.]

### *OSI scoring*

Now we would like to ask you some questions regarding science and technology. [Questions presented in random order.]

- All radioactivity is man-made [True / False]
- Electrons are smaller than atoms [True / False]

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<sup>5</sup> Respondents selecting this option were automatically removed from the survey.

- Does the Earth go around the Sun, or does the Sun go around the Earth? [The Earth goes around the Sun / The Sun goes around the Earth]

[If “The Earth goes around the Sun”] How long does it take for the Earth to go around the Sun? [1 day / 1 month / 1 year]

- Which gas makes up most of the Earth’s atmosphere? [Hydrogen / Nitrogen / Carbon dioxide / Oxygen]
- Lasers work by focusing sound waves [True / False]
- Antibiotics kill viruses as well as bacteria [True / False]

### *Grid scoring*

People in our society often disagree about issues of equality and discrimination. How strongly do you agree or disagree with each of these statements? [Questions presented in random order. All answers on scale of Strongly disagree / Moderately disagree / Slightly disagree / Slightly agree / Moderately agree / Strongly agree. Overall indices created through principal factor scores.]

- We have gone too far in pushing equal rights in this country.
- Our society would be better off if the distribution of wealth was more equal.
- We need to dramatically reduce inequalities between the rich and the poor, whites and people of color, and men and women.
- Discrimination against minorities is still a very serious problem in our society.
- It seems like blacks, women, homosexuals, and other groups don’t want equal rights, they want special rights just for them.
- Society as a whole has become too soft and feminine.



### *Group ideology scoring*

People in our society often disagree about how far to let individuals go in making decisions for themselves. How strongly do you agree or disagree with each of these statements? [Questions presented in random order. All answers on scale of Strongly disagree / Moderately disagree / Slightly disagree / Slightly agree / Moderately agree / Strongly agree. Overall indices created through principal factor scores.]

- The government interferes far too much in our everyday lives.
- Sometimes government needs to make laws that keep people from hurting themselves.
- It's not the government's business to try to protect people from themselves.
- The government should stop telling people how to live their lives.
- The government should do more to advance society's goals, even if that means limiting the freedom and choice of individuals.
- Government should put limits on the choices individuals can make so they don't get in the way of what's good for society.

#### Section 4. Full models presented in the paper's main text

Tables S4-S8 present the full models that appear in the main text.

	OLS coefficient (robust std. errors)	95% interval		<i>p</i> -value
Republican (0, 1)	0.006 (.010)	-0.146	0.026	0.590
Democrat (0, 1)	0.004 (.010)	-0.015	0.023	0.686
OSI	0.047 (.006)	0.035	0.059	<0.001
College (0, 1)	0.012 (.009)	-0.005	0.029	0.162
Female (0, 1)	-0.011 (.009)	-0.028	0.006	0.197
White (0, 1)	0.030 (.009)	0.012	0.048	0.001
Module (1-4)	-0.003 (.004)	-0.011	0.005	0.424
Constant	0.702 (.013)	0.676	0.728	<0.001
N	1,137 respondents			
Adj-R <sup>2</sup>	0.093			

**Table S4a.** Full Results for Figure 4a. OLS regression analyzing variation in response accuracy across respondents.

	OLS coefficient (robust std. errors)	95% interval		<i>p</i> -value
Violent risk (0, 1)	-0.022 (.020)	-0.062	0.019	0.286
Environmental risk (0, 1)	-0.057 (.041)	-0.139	0.025	0.168
Health risk (0, 1)	-0.015 (.017)	-0.050	0.019	0.384
Natural disaster (0, 1)	0.037 (.018)	0.002	0.072	0.039
Existential risk (0, 1)	0.092 (.030)	0.032	0.152	0.003
Actual mortality (log)	-0.086 (.018)	-0.123	-0.049	<0.001
Actual mortality (log) <sup>2</sup>	0.015 (.003)	0.008	0.021	<0.001
Constant	0.800 (.032)	0.735	0.864	<0.001
N	100 risks			
Adj-R <sup>2</sup>	0.544			

**Table S4b.** Full Results for Figure 4b. OLS regression analyzing variation in response accuracy across risks.

	OLS coefficient (robust std. errors)	95% interval		<i>p</i> -value
<i>Harm</i>	0.107 (.058)	-0.008	0.221	0.068
<i>Fairness</i>	0.410 (.116)	0.180	0.640	<0.001
<i>Responsibility</i>	0.345 (.072)	0.201	0.488	<0.001
<i>Long-term growth</i>	0.182 (.082)	0.019	0.345	0.029
<i>Disaster potential</i>	-0.104 (.096)	-0.295	0.088	0.285
<i>Worry</i>	0.212 (.152)	-0.090	0.514	0.166
Violent risk (0, 1)	-0.034 (.024)	-0.083	0.015	0.167
Environmental risk (0, 1)	0.021 (.025)	-0.029	0.070	0.402
Health risk (0, 1)	0.062 (.020)	0.024	0.101	0.002
Natural disaster (0, 1)	-0.029 (.034)	-0.097	0.040	0.410
Existential risk (0, 1)	0.009 (.021)	-0.032	0.051	0.662
Constant	-0.096 (.026)	-0.148	-0.045	<0.001
N	100 risks			
Adj-R <sup>2</sup>	0.878			

**Table S5.** Full Results for Figure 5. OLS regression analyzing variation in *Priority* across risks.

	OLS coefficient (robust std. errors)	95% interval		<i>p</i> -value
<i>Harm</i>	0.515 (.073)	0.372	0.659	<0.001
Constant	0.244 (.042)	0.161	0.327	<0.001
N	100 risks			
Adj-R <sup>2</sup>	0.325			

**Table S6a.** Full Results for Figure 6a. OLS regressions analyzing variation in *Priority* across risks (*N*=100).

	OLS coefficient (robust std. errors)	95% interval		<i>p</i> -value
<i>Harm</i>	0.287 (.033)	0.221	0.353	<0.001
<i>Fairness</i>	0.479 (.062)	0.357	0.602	<0.001
<i>Responsibility</i>	0.370 (.050)	0.271	0.468	<0.001
Constant	-0.066 (.021)	-0.108	-0.023	0.003
N	100 risks			
Adj-R <sup>2</sup>	0.828			

**Table S6b.** Full Results for Figure 6b. OLS regressions analyzing variation in *Priority* across risks (*N*=100).

	Logit coefficient (bootstrapped standard errors)	95% interval		<i>p</i> -value
<i>Harm</i> <sub>i,j</sub>	0.340 (.118)	0.109	0.574	0.007
<i>Fairness</i> <sub>i,j</sub>	1.156 (.123)	0.917	1.392	<0.001
<i>Responsibility</i> <sub>i,j</sub>	0.966 (.117)	0.748	1.185	<0.001
<i>Long-term growth</i> <sub>i,j</sub>	0.429 (.132)	0.159	0.687	0.001
<i>Disaster potential</i> <sub>i,j</sub>	0.576 (.147)	0.294	0.857	0.001
<i>Worry</i> <sub>i,j</sub>	0.814 (.133)	0.554	1.090	<0.001
Violent risk (0, 1)	0.041 (.056)	-0.072	0.145	0.476
Environmental risk (0, 1)	0.182 (.061)	0.058	0.299	0.005
Health risk (0, 1)	0.318 (.040)	0.235	0.393	<0.001
Natural disaster (0, 1)	-0.246 (.061)	-0.368	-0.123	<0.001
Existential risk (0, 1)	-0.093 (.062)	-0.209	0.028	0.131
Constant	-2.267 (.071)	-2.419	-2.130	<0.001

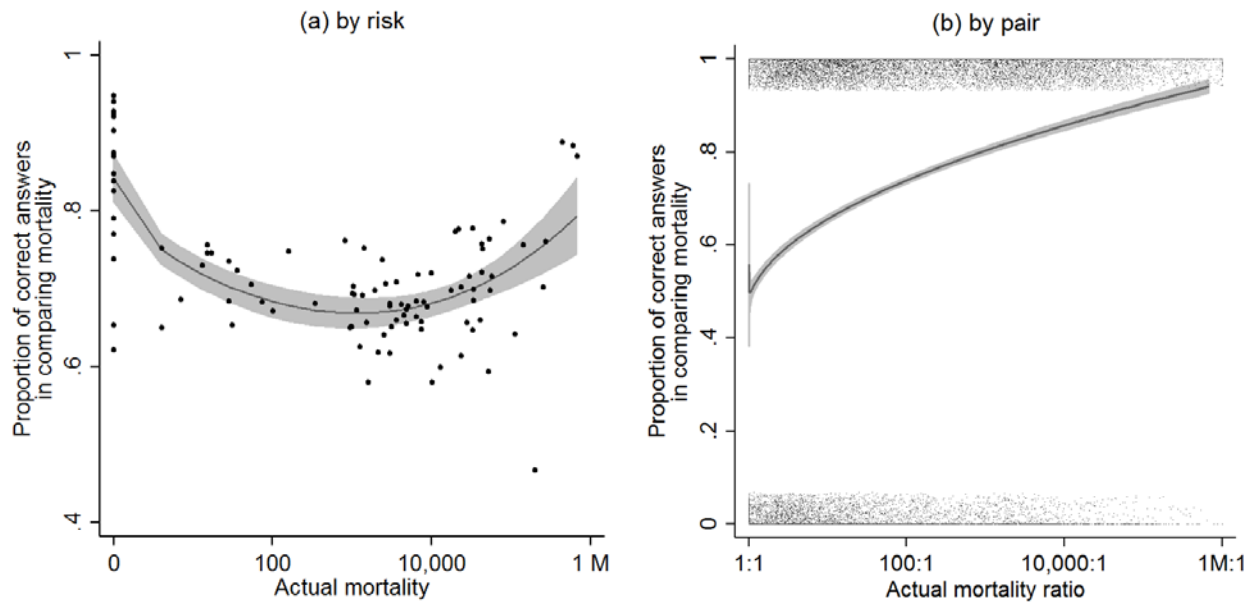
**Table S7a.** Full Results for Figure 7a. Uncertainty estimates based on 1,500 bootstrapped samples, clustered by respondent and stratified by index.

	Logit coefficient (bootstrapped standard errors)	95% interval		<i>p</i> -value
<i>Harm</i> <sub>i,j</sub>	0.386 (.161)	0.080	0.714	0.018
<i>Fairness</i> <sub>i,j</sub>	0.882 (.203)	0.463	1.262	<0.001
<i>Responsibility</i> <sub>i,j</sub>	1.076 (.176)	0.741	1.426	<0.001
<i>Long-term growth</i> <sub>i,j</sub>	0.570 (.182)	0.190	0.921	0.002
<i>Disaster</i> <sub>i,j</sub>	0.554 (.222)	0.117	0.966	0.012
<i>Worry</i> <sub>i,j</sub>	0.836 (.204)	0.438	1.225	<0.001
Violent risk (0, 1)	0.041 (.057)	-0.070	0.147	0.473
Environmental risk (0, 1)	0.176 (.062)	0.051	0.293	0.006
Health risk (0, 1)	0.320 (.040)	0.240	0.397	<0.001
Natural disaster (0, 1)	-0.241 (.062)	-0.364	-0.114	<0.001
Existential risk (0, 1)	-0.088 (.061)	-0.201	0.034	0.166
Constant	-2.278 (.071)	-2.425	-2.144	<0.001
Rep* <i>Harm</i> <sub>i,j</sub>	-0.023 (.253)	-0.513	0.515	0.937
Dem* <i>Harm</i> <sub>i,j</sub>	-0.119 (.219)	-0.552	0.314	0.570
Rep* <i>Fairness</i> <sub>i,j</sub>	0.527 (.307)	-0.076	1.141	0.089
Dem* <i>Fairness</i> <sub>i,j</sub>	0.304 (.270)	-0.242	0.828	0.247
Rep* <i>Responsibility</i> <sub>i,j</sub>	-0.214 (.256)	-0.728	0.260	0.383
Dem* <i>Responsibility</i> <sub>i,j</sub>	-0.095 (.227)	-0.572	0.323	0.663
Rep* <i>Long-term growth</i> <sub>i,j</sub>	-0.222 (.306)	-0.806	0.391	0.461
Dem* <i>Long-term growth</i> <sub>i,j</sub>	-0.188 (.261)	-0.704	0.342	0.487
Rep* <i>Disaster potential</i> <sub>i,j</sub>	-0.044 (.361)	-0.716	0.645	0.899
Dem* <i>Disaster potential</i> <sub>i,j</sub>	0.069 (.300)	-0.527	0.622	0.792
Rep* <i>Worry</i> <sub>i,j</sub>	-0.027 (.334)	-0.683	0.599	0.925
Dem* <i>Worry</i> <sub>i,j</sub>	0.024 (.319)	-0.637	0.669	0.936

**Table S7b.** Full Results for Figure 7b. Uncertainty estimates based on 1,500 bootstrapped samples, clustered by respondent and stratified by index.

## Section 5. Additional analysis of mortality perceptions and media coverage

Figure 4 described a U-shaped relationship between the number of deaths that risks cause and respondents' ability to make accurate pairwise comparisons on the mortality index. Figure S3a presents this pattern in more detail, showing that respondents were consistently better-able to rank risks that fell at the extreme ends of the mortality spectrum.



**Figure S3.** *Response accuracy versus actual mortality.* Fractional polynomials with 95% intervals. (a) Average response accuracy for 100 risks, plotted against actual mortality. (b) Response accuracy for 19,353 pairwise comparisons, plotted against the ratio of actual mortality between the larger and smaller entry in each pair. *Note:* Response accuracy was 72% across the data set as a whole.

Note, however, that even when risks fell at the “trough” of this curve, respondents could still accurately discriminate them from alternatives roughly two-thirds of the time. Figure S3a demonstrates that there is just one risk in the data set (Air pollution) that respondents did not rank

correctly in a majority of cases.<sup>6</sup> There are just four other risks (child abuse, birth defects, poisoning, and urinary disorders) for which response accuracy did not exceed 60%.

Figure S3b examines the relationship between mortality and response accuracy across all 19,353 pairwise comparisons in the data set.<sup>7</sup> The horizontal axis in this graph is the ratio between the mortality caused by the larger versus the smaller risk involved with each comparison. As one might expect, respondents demonstrated a steady gain in response accuracy as the gap in mortality grows between risks that respondents compared.

Note, for instance, that average response accuracy exceeds 60% before this ratio reaches 10:1. Though this finding may sound unimpressive on its face, it casts doubt on the notion that Americans prioritize combating risks like terrorism over actuarially-greater dangers like traffic accidents because they misperceive the relative magnitude of those problems. In order for misperceptions of harm to explain such preferences, voters' estimates of the harm caused by terrorism would not just have to be mistaken by a factor of ten – they would have to be mistaken by a factor of *ten thousand*. The data offer no support for believing that voters systematically misperceive risks in this way. Indeed, the data show that by the time the ratio between two risks

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<sup>6</sup> Respondents generally underestimated the mortality caused by air pollution relative to the best published estimates (Caiazzo et al. 2013).

<sup>7</sup> As before, this analysis drops pairwise comparisons between risks with identical mortality statistics.

reaches 10,000:1, respondents accurately discriminated among risks more than 80% of the time.<sup>8</sup> (This is surely an underestimate of respondents' true knowledge given inevitable errors and noncompliance among some survey-takers.)

### *Media mentions*

The survey data provide additional opportunities to examine claims about how media coverage shapes voters' perceptions of risk. One of the most common arguments to this effect is the idea that frequent media coverage inflates voters' perceptions of how commonly risks occur, while infrequent media coverage causes voters to underestimate risk magnitudes (e.g., Pidgeon et al. 2003; Posner 2004; Sunstein 2004; Mueller 2006; Gadarian 2010). If that were true, then one would expect to see a *concave* relationship between media coverage and the accuracy of mortality rankings: respondents should provide their least-accurate assessments when judging the mortality associated with risks that receive large amounts of media coverage. The remainder of this section provides a rough test of that claim using an index of media mentions based on all U.S. newspapers in the LexisNexis database. (Section 13 describes those data in more detail, below.)

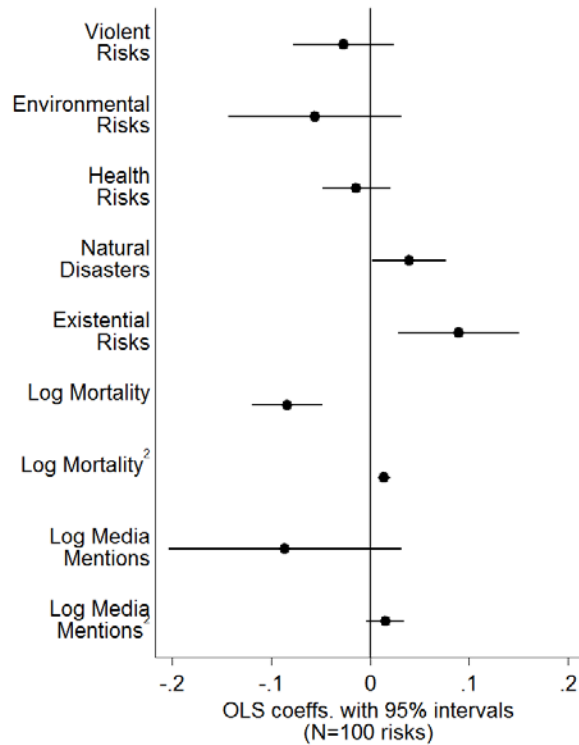
Figure S4 adds linear and squared terms for media mentions to its earlier analysis of respondents' mortality rankings. These data indicate a *convex* relationship between media mentions and response accuracy, and Figure S5 demonstrates that this nonlinearity is mainly driven by risks that receive low numbers of media mentions. For instance, solar flares received

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<sup>8</sup> Note this is different from saying that respondents ranked 80% of such risks correctly – as mentioned above, there was just a single risk in the data set that respondents did not rank correctly in a majority of pairwise comparisons.

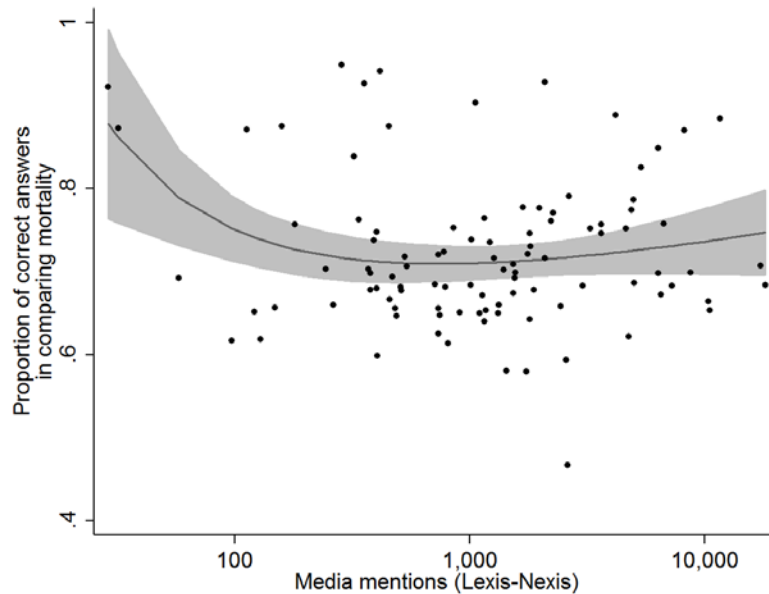


fewer media mentions than any other risk in the data set, and this was also the risk that respondents were most accurate in assessing, choosing the right answer for 92% of pairwise comparisons between solar flares and randomly-chosen alternatives.<sup>9</sup>



**Figure S4.** *Heterogeneity in response accuracy.* Predicts proportion of correct answers by risk. This model replicates Figure 4, adding data on media mentions. Constant=0.91, adj-R<sup>2</sup>=0.54.

<sup>9</sup> This pattern is consistent with scholarship on the “recognition heuristic” (Gigerenzer & Goldstein 2011), which suggests that individuals would intuitively assume that a risk is rare if they have not previously been exposed to information about it.



**Figure S5.** *Response accuracy versus media mentions.* Fractional polynomial with 95% interval, plotting average response accuracy against actual mortality for 100 risks.

Respondents' performance was mixed when assessing risks with the highest numbers of media mentions. For example, terrorism falls on the 97<sup>th</sup> percentile for media mentions according to these data, and respondents were slightly less accurate when making pairwise comparisons that involved this risk: response accuracy was 65% for pairwise comparisons involving terrorism versus 72% across the data as a whole.<sup>10</sup> Homicides, which fell at the 90<sup>th</sup> percentile of the media mentions spectrum, were also associated with slightly less-accurate responses (70%). But the data show that respondents gave unusually-accurate answers for several other risks that receive extensive media coverage, such as alcohol (92<sup>nd</sup> percentile, 76% response accuracy) and cancer (98<sup>th</sup> percentile, 88% response accuracy). If we examine the top decile of risks on the media mentions spectrum,

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<sup>10</sup> Note that the data still show, however, that respondents could accurately discriminate between terrorism and randomly-chosen alternatives roughly two-thirds of the time.

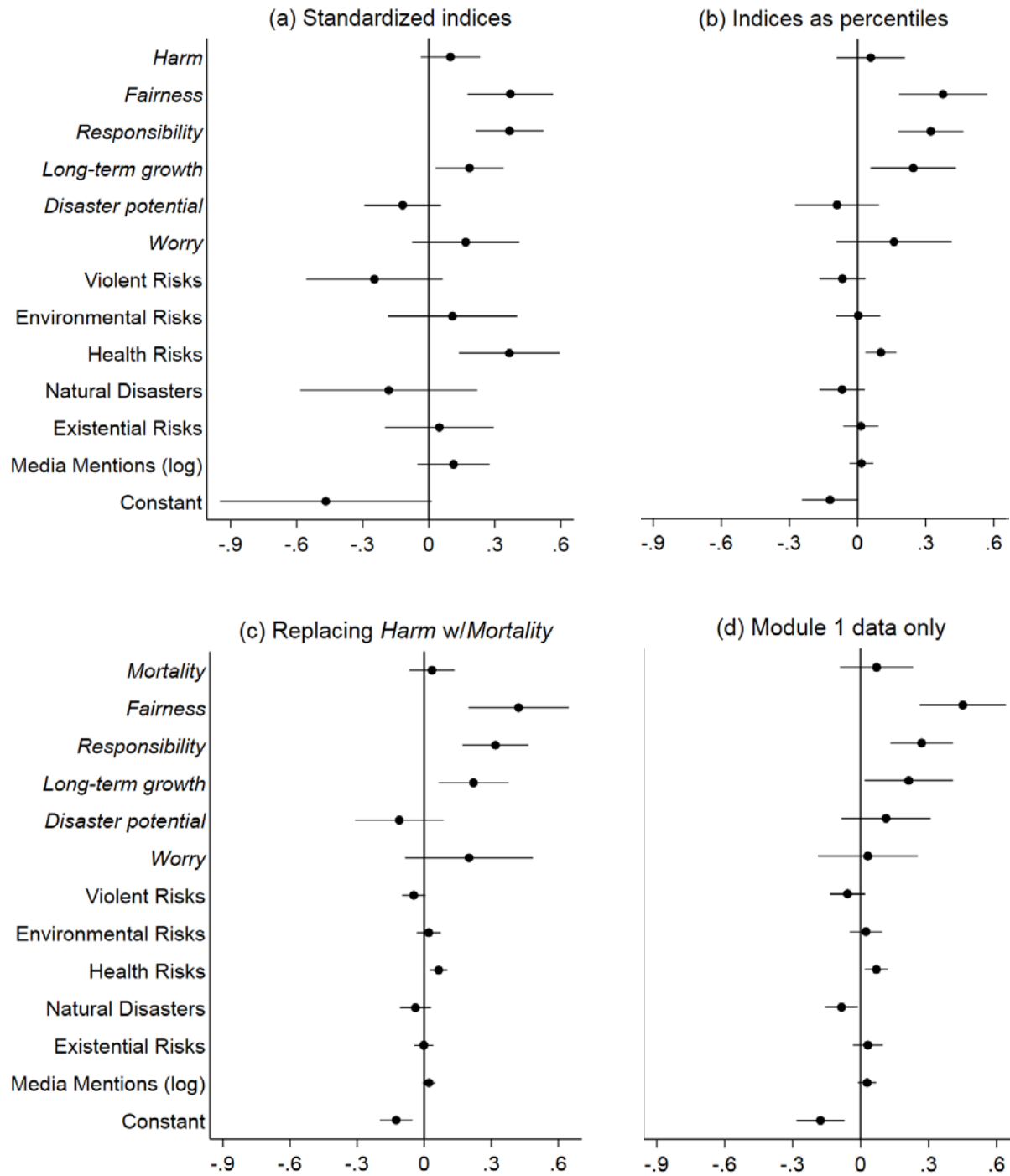
response accuracy was 72% – essentially identical to baseline response accuracy across the data as a whole.

These findings do not suggest that media coverage is unimportant for shaping perceptions of risk. For instance, media coverage likely shapes respondents’ value judgments on issues like fairness and governmental responsibility. (Table S10 below shows that media mentions are indeed correlated with these indices). A more extensive study of this issue should, of course, show that findings are robust to alternative measures of media coverage. And even if high levels of media coverage do not appear to warp respondents’ perceptions of mortality in general, this does not prove that the availability heuristic is irrelevant to individual cases.

Yet it should ultimately be unsurprising to see that high levels of media coverage do not severely impact respondents’ ability to estimate the mortality associated with public risk. Tversky and Kahneman (1976) originally argued that one reason why individuals rely on the availability heuristic is that this heuristic actually provides a decent rule of thumb for estimating probability: generally speaking, objects that come more easily to mind tend to be more common. The data similarly indicate that risks receiving more media coverage tend to be more deadly, all else being equal (corr=0.22,  $p<0.05$ ).

### **Section 6. Additional analysis of findings presented in Figure 5**

Figure S6 demonstrates that the findings in Figure 5 are robust to (a) standardizing continuous variables; (b) replacing survey indices with percentile rankings; (c) replacing *Harm* with *Mortality* for each index; and (d) only analyzing data from the first survey module, before there could be any contamination across survey questions.



OLS coefficients with 95% intervals

**Figure S6.** Predicting the position of 100 risks along the Priority index. Confidence intervals based on robust standard errors.

## Section 7. Replication of Figure 5 for fifteen subgroups of respondents

Figure S7 replicates the results from Figure 5 using data drawn from fifteen subgroups of respondents, divided according to political party (Republican, Democrat, Independent), gender (Female, Male), race (white, non-white), education (college, non-college), ordinary science intelligence (above/below the mean) and grid-group ideology (above/below the mean for each dimension).<sup>11</sup>

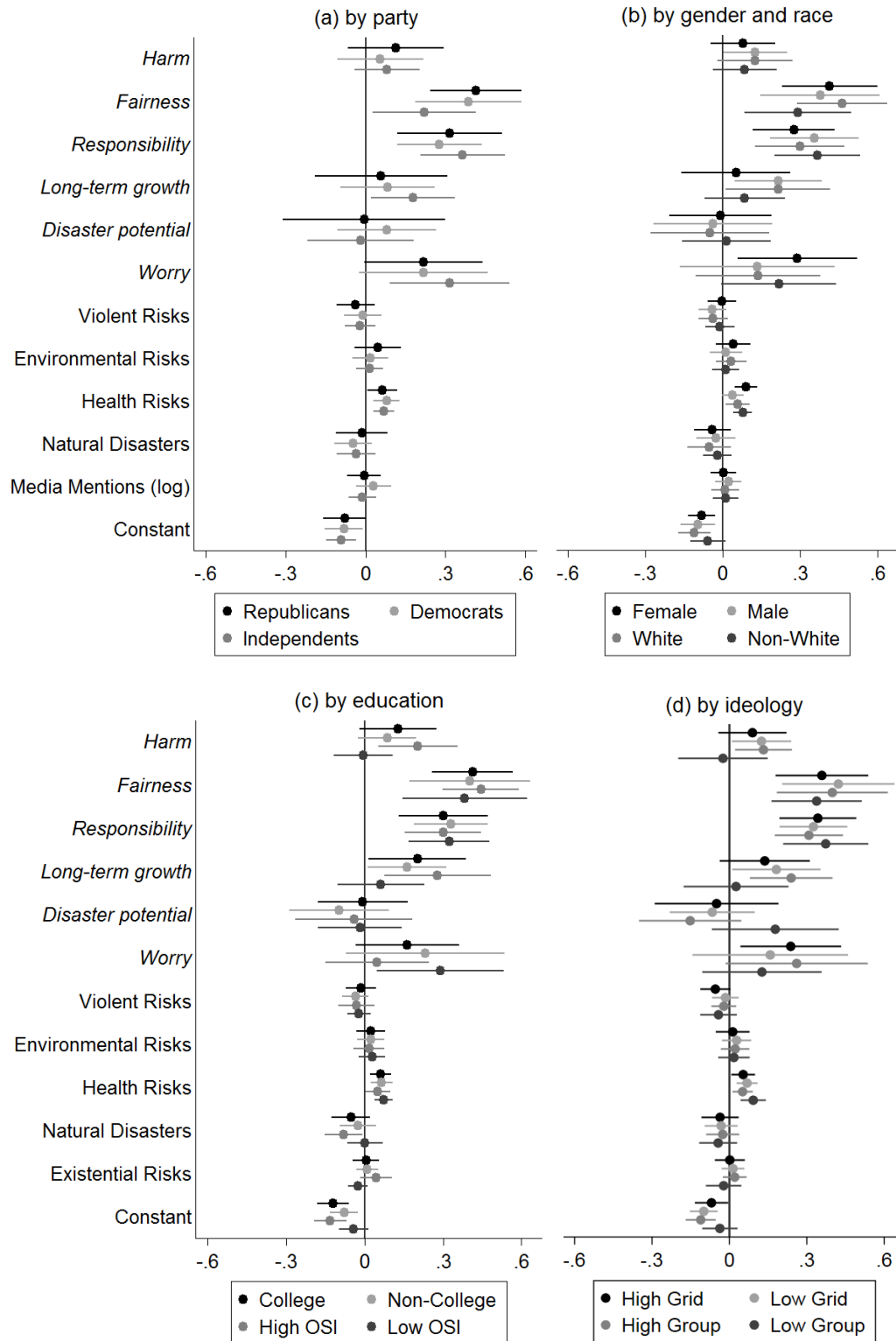
In each case, the data were limited to respondents who meet a given criterion; all survey indices were reconstructed based on pairwise comparisons completed by members of that subgroup; and then those indices were used to predict how those respondents ranked risks along the *Priority* index.

Across these 15 subgroups, the *Harm* index meets the  $p < 0.05$  threshold in predicting policy priorities just once: for respondents who scored above the median on ordinary science intelligence. Even here, the *Harm* coefficient carries roughly one-quarter the predictive power of *Fairness* and *Responsibility* combined.<sup>12</sup>

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<sup>11</sup> “Grid” and “group” ideology capture respondents’ preferences for hierarchical versus egalitarian social orderings and for individual liberty versus group solidarity, respectively (Douglas 1992; Wildavsky 1987). These ideologies appear to play major roles in shaping the cultural orientation of mass public opinion (Gastil et al. 2011), particularly with respect to risk attitudes (Douglas and Wildavsky 1982; Kahan and Braman 2003).

<sup>12</sup> Note also that the  $p < 0.05$  standard is far too permissive for conducting so many simultaneous hypothesis tests.



OLS coefficients with 95% intervals

**Figure S7.** Predicting risk priorities across subgroups. Each model replicates the analysis in Figure 5 using data drawn from a specific subset of respondents.

Figure S7 shows just one case in which the *Fairness* and *Responsibility* indices are not the two best predictors of respondents' policy priorities. This occurs when analyzing Independents, for whom the *Worry* index has a larger coefficient than *Fairness* ( $b=0.32$  vs.  $b=0.22$ ). Both of these coefficients are substantially larger than the predictive value of *Harm* ( $b=0.08$ ), which falls well short of conventional standards for statistical significance ( $p=0.20$ ) in this model.

## Section 8. Bootstrap procedure and additional analysis of bootstrapped results

The paper's bootstrap procedure involves four steps.

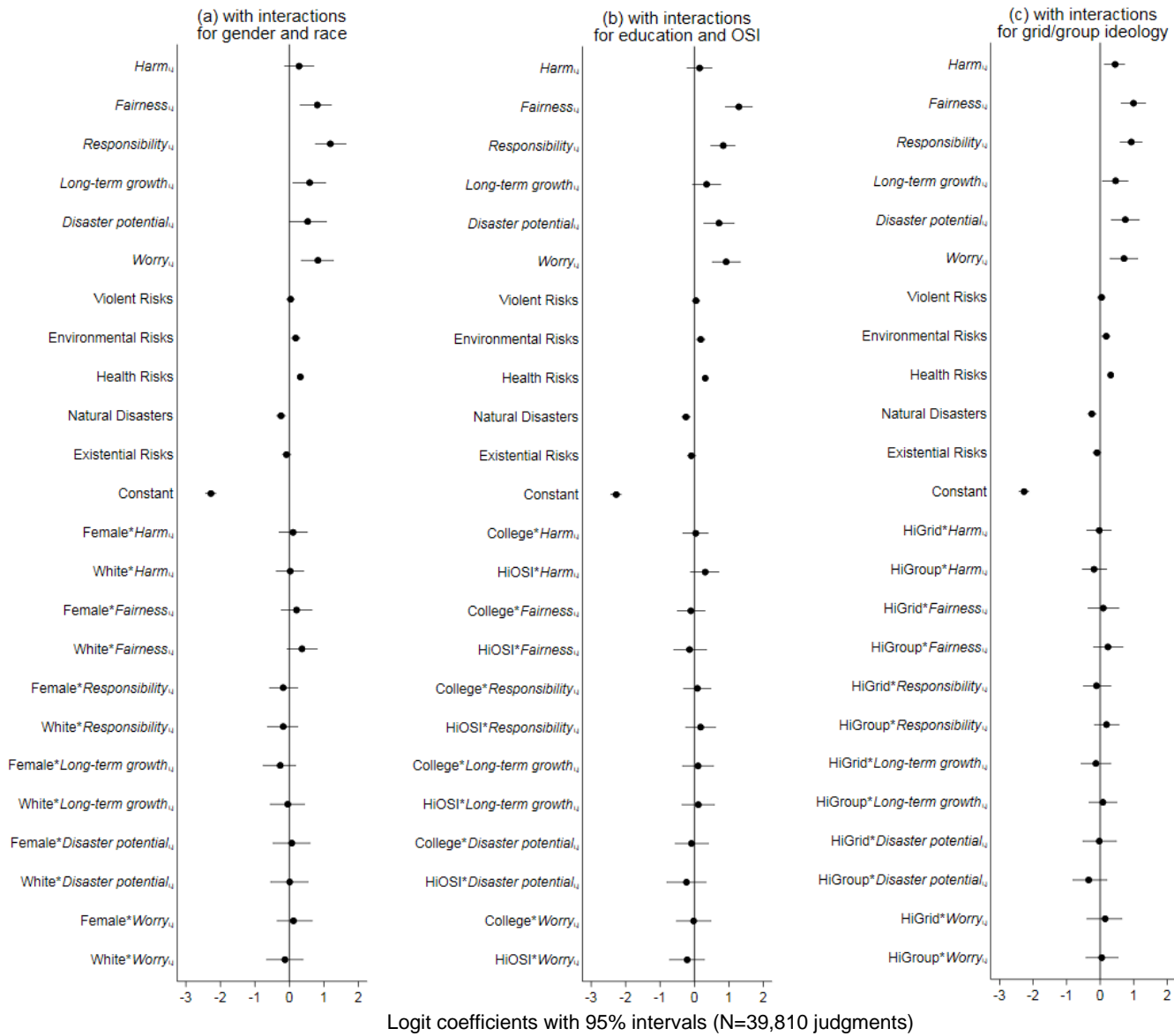
1. Bootstrap sampling, stratified by index and clustered by respondent. Thus, for each survey module in the data set (e.g., pairwise comparisons involving judgments of *Harm*, *Fairness*, *Responsibility*, etc.), the bootstrap algorithm selects a random sample of respondents, with replacement.
2. Fit logit models to capture the probability that respondent  $i$  will select risk  $j$  in a pairwise comparison against a randomly-chosen alternative along dimension  $k$ , where  $k \in \{Harm, Fairness, Responsibility, Long-term\ growth, Disaster\ potential, Worry\}$ .
3. Generate predicted probabilities corresponding to every risk that respondents analyzed in the *Priority* module. Thus, if respondent  $i$  was asked to judge the probability that Terrorism deserves a higher priority for public spending than Traffic Accidents, we would estimate  $\widehat{Harm}_{i,terrorism}$ ,  $\widehat{Fairness}_{i,terrorism}$ ,  $\widehat{Responsibility}_{i,terrorism}$ , and so forth. We would also estimate these predicted probabilities for Traffic Accidents.
4. Examine how these index values correlate with risk priorities using logit analyses.

Figure S8 expands upon the paper’s analysis by analyzing interaction terms based on (a) gender and race; (b) college education and OSI score; (c) grid-group ideology scores; and (d) terms for demographics, education, and political orientation simultaneously.<sup>13</sup> As in Figure 7b, we see that none of these interaction terms is statistically-significant, nor does including these terms influence the paper’s main findings.

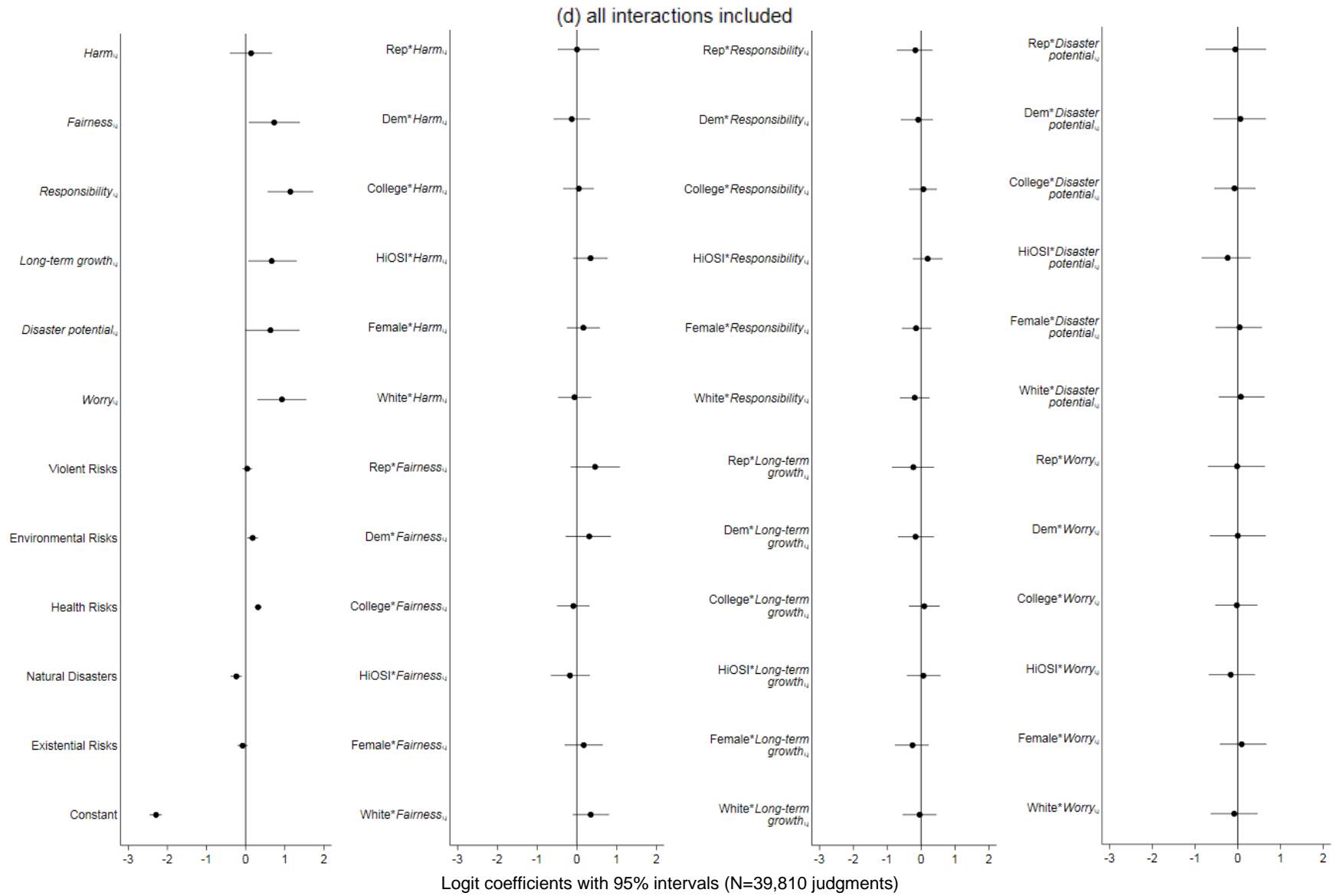
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<sup>13</sup> As in Figure S6, “high” scores on the OSI, grid ideology, and group ideology measures are those above the mean.





**Figure S8.** Exploring heterogeneity in respondents' risk priorities. Confidence intervals based on 1,500 bootstrap samples.



**Figure S8 (cont.).** Exploring heterogeneity in respondents' risk priorities. Confidence intervals based on 1,500 bootstrap samples.

## Section 9. Correlation matrices

	<i>Priority</i>	<i>Priority-Margin</i>	<i>Harm</i>	<i>Mortality</i>	<i>Fairness</i>	<i>Responsibility</i>	<i>Disaster potential</i>	<i>Long-term growth</i>	<i>Worry</i>
<i>Priority</i>	1.00								
<i>Priority-margin</i>	0.95	1.00							
<i>Harm</i>	0.58	0.54	1.00						
<i>Mortality</i>	0.50	0.47	0.94	1.00					
<i>Fairness</i>	0.82	0.79	0.39	0.34	1.00				
<i>Responsibility</i>	0.76	0.65	0.23	0.18	0.68	1.00			
<i>Disaster potential</i>	0.74	0.67	0.61	0.54	0.66	0.70	1.00		
<i>Long-term growth</i>	0.74	0.69	0.57	0.46	0.57	0.68	0.85	1.00	
<i>Worry</i>	0.84	0.82	0.62	0.56	0.80	0.64	0.82	0.75	1.00

**Table S8.** *Correlations among indices*

	Actual mortality (log)	Media mentions (log)
<i>Priority</i>	0.31	0.55
<i>Priority-margin</i>	0.33	0.44
<i>Harm</i>	0.77	0.51
<i>Mortality</i>	0.82	0.48
<i>Fairness</i>	0.16	0.43
<i>Responsibility</i>	-0.11	0.47
<i>Disaster potential</i>	0.18	0.64
<i>Long-term growth</i>	0.13	0.56
<i>Worry</i>	0.37	0.59

**Table S9.** *Correlations between indices and actual mortality / media mentions*

## Section 10. Respondent justifications for *Fairness* and *Responsibility* rankings

The paper shows that respondents' perceptions of fairness and governmental responsibility explain independent variation in priorities for public spending, and that both of these judgments explain more variation in respondents' spending priorities than perceptions of mortality or harm. The paper's concluding discussion thus argues that further research should seek to understand how voters develop subjective beliefs about the extent to which some risks are more unfair to their victims than others, and why voters think that the government has more of an obligation to protect its citizens from specific kinds of risks. This section takes initial steps towards that goal by analyzing the results of a follow-up survey involving 500 respondents.<sup>14</sup>

After agreeing to a consent form and providing demographic information,<sup>15</sup> each respondent completed eight pairwise comparisons along either the *Fairness* or the *Responsibility* dimensions.

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<sup>14</sup> As with the survey presented in the paper's main text, all respondents were recruited via Qualtrics from Americans that were at least 18 years of age; all respondents were required to complete an attention check; and "speeders" who finished the survey in less than one-third of the median completion time were excluded from the study. Median completion time was 6.3 minutes.

<sup>15</sup> Respondents had similar demographic proportions to the paper's main survey: 49% of these respondents were female, 14% were African-American, 16% were Hispanic, and 63% were non-Hispanic white. The sample again skewed slightly liberal (36% Democrat vs. 30% Republican) and had disproportionately high levels of formal education, with 51% holding a college degree. All findings reported below are weighted by gender (female vs. male), race (white vs. non-

This assignment varied at random between respondents. Risk pairs varied at random within each survey, based on the same set of 100 risks studied in the paper’s main text.

The survey then asked respondents to explain *why* they made these comparisons the way that they did. Respondents could choose among the following 10 options to explain their choices. (The labels shown in brackets did not appear within the survey itself.) The order of these statements varied randomly between respondents. Respondents could also indicate that “Other reasons” influenced their choice. If so, they had the option of writing in what those reasons entailed.<sup>16</sup>

- Victims cannot control their exposure to this risk [CONTROL]
- This risk is not equally distributed across society [INEQUITY]
- This risk is deliberately inflicted on its victims [MALIGN ACTION]
- This risk causes extreme pain and suffering [SUFFERING]
- Citizens need government assistance to reduce this risk [PUBLIC GOODS]
- This risk causes damage that cannot be undone [IRREVERSIBILITY]
- This risk affects a large number of people [SCOPE]
- Government can reduce this risk without infringing civil liberties [RIGHTS]
- This risk is produced by foreign actors [FOREIGN]
- This risk is not a normal part of society [ABNORMALITY]
- Other reasons [OTHER]

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white), education (college vs. non-college), and political party (Republican vs. Democrat vs. Independent), using the same margins reported in Table S3.

<sup>16</sup> The “Other reasons” option always appeared at the bottom of the list.

The first eight statements that appear on this list reflect considerations described in the paper's theoretical discussion. The paper argued that the CONTROL, INEQUITY, SUFFERING, and MALIGN ACTION attributes were all likely to predict respondents' judgments of why some risks are more unfair to their victims than others. The paper then explained why the PUBLIC GOODS, IRREVERSIBILITY, SCOPE, and RIGHTS attributes were all likely to predict respondents' judgments of why the U.S. government bears more responsibility for fighting specific kinds of risks.

The last two attributes on this list – FOREIGN and ABNORMALITY – were selected because they could potentially play into considerations of both responsibility *and* fairness. For example, many people presumably believe that the government has special responsibilities to protect its citizens against foreign threats, and that citizens could reasonably expect to live free from harm caused by outsiders. Slovic (2000) and others have further demonstrated that many people are especially-averse to threats that seem unnatural or unfamiliar.<sup>17</sup> Voters may believe that government has a special responsibility to eliminate unnatural risks, and that the incidence of those risks is especially unfair to victims.<sup>18</sup>

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<sup>17</sup> Slovic (2000) provides further empirical demonstration that many of the factors described in this section – particularly perceptions of CONTROL, EQUITY, MALIGN ACTION, and IRREVERSIBILITY – play fundamental roles in shaping how individuals perceive acceptable levels of risk.

<sup>18</sup> This is presumably one reason why many voters are averse to the risks associated with nuclear energy (Weart 2012). By contrast, most Americans seem to have accepted that 20,000 annual fatalities from traffic accidents is a normal part of social life (Mueller 1989, 267-269).

Attribute		% invoked when explaining comparisons of		p-value
		<i>Fairness</i>	<i>Responsibility</i>	
CONTROL. (Victims cannot control their exposure to this risk.)	Primary reason	0.21	0.12	<0.001
	All reasons	0.34	0.22	<0.001
INEQUITY. (This risk is not equally distributed across society.)	Primary	0.05	0.05	0.85
	All	0.12	0.12	0.68
MALIGN ACTION. (This risk is deliberately inflicted on its victims.)	Primary	0.10	0.06	<0.001
	All	0.19	0.13	<0.001
SUFFERING. (This risk causes extreme pain and suffering.)	Primary	0.15	0.11	<0.001
	All	0.29	0.22	<0.001
PUBLIC GOODS. (Citizens need government assistance to reduce this risk.)	Primary	0.04	0.11	<0.001
	All	0.12	0.22	<0.001
IRREVERSIBILITY. (This risk causes damage that cannot be undone.)	Primary	0.12	0.10	0.13
	All	0.23	0.20	<0.01
SCOPE. (This risk affects a large number of people.)	Primary	0.16	0.22	<0.001
	All	0.30	0.35	<0.001
RIGHTS. (Government can reduce this risk without infringing civil liberties.)	Primary	0.05	0.09	<0.001
	All	0.11	0.17	<0.001
FOREIGN. (This risk is produced by foreign actors.)	Primary	0.03	0.03	0.62
	All	0.08	0.08	0.82
ABNORMALITY. (This risk is not a normal part of society.)	Primary	0.06	0.05	0.33
	All	0.14	0.13	0.56
OTHER	Primary	0.03	0.05	<0.001
	All	0.05	0.06	0.02

**Table S10.** *Explanations for respondents' comparisons of Fairness and Responsibility.* Compares the proportion of the time that respondents invoked each explanation when justifying pairwise comparisons. These data distinguish between invoking an explanation as the primary justification for each ranking versus one of several relevant explanations for each ranking. P-values reflect differences in response frequency between the *Fairness* and *Responsibility* portions of the survey.  $N=4,000$  for all tests.

The survey asked respondents to indicate their primary justification for making each pairwise comparison, and then to indicate any other reasons that influenced their choice. The survey asked respondents to explain each pairwise comparison individually – thus, respondents were not required to provide the same justification(s) in each case. Respondents received the same list of statements regardless of whether they were ranking risks according to *Fairness* or *Responsibility*. This research design makes it possible to compare the frequency with which respondents invoked different reasons in order to justify the way they ranked risks on each of these dimensions. Table S10 presents results.

Table S10 shows that the FOREIGN, ABNORMALITY, and INEQUITY attributes played similar roles in shaping respondents' perceptions of fairness and governmental responsibility. (To be more precise, respondents cited these concerns equally-often when explaining how they ranked risks along the survey's *Fairness* and *Responsibility* dimensions.) By contrast, the data show that respondents were significantly more likely to invoke the CONTROL, MALIGN ACTION, and SUFFERING attributes when explaining why some risks were more unfair to their victims, and that they were significantly more likely to invoke the PUBLIC GOODS, SCOPE, and RIGHTS attributes when explaining why government has more responsibility to combat some risks over others.<sup>19</sup> These results are consistent with the paper's empirical results showing that, even if the

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<sup>19</sup> These differences in means are statistically significant at the  $p < 0.001$  level. The data also suggest that respondents were more likely to invoke the IRREVERSIBILITY attribute when explaining their judgments of *Fairness*, but this finding is not statistically significant ( $p = 0.13$ ) when analyzing primary explanations only.



*Fairness* and *Responsibility* indices were partially-correlated, they still predict independent variation in respondents' risk priorities.<sup>20</sup>

The design of this survey has several limitations that more extensive research on this subject could address. For example, the nature of the task that the survey presented was relatively complex – much more so than making pairwise comparisons alone. Respondents surely varied in how much thought they devoted to making and explaining their judgments. This means that the data are better-suited to identifying differences in response frequencies rather than drawing inferences about how much weight these judgments carried in absolute terms.<sup>21</sup>

Another limitation of this survey is that understanding which judgments shape perceptions of fairness and responsibility is different from asking how those judgements ultimately shape respondents' policy preferences. Linking these attributes to respondents' policy preferences requires additional theorization, and testing such claims would almost surely require in-depth

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<sup>20</sup> Republicans and Democrats showed no statistically-significant differences in their propensity to invoke any of these justifications. Men were more likely than women to invoke the INEQUITY and RIGHTS justifications, while women were more likely to invoke the SUFFERING justification, but each of these differences was substantively small (2-3 percentage points).

<sup>21</sup> Note that measurement error and random responses would only attenuate the statistical significance of any differences in means. Moreover, all results in Table S10 hold when dropping the last four comparisons that respondents completed/explained, where their answers might have been less reliable due to survey fatigue.

experimental analysis.<sup>22</sup> One value of the exploratory findings presented here is that they provide some insight into where scholars might focus these kinds of in-depth analyses.

The survey's write-in responses also suggest some additional factors that belong in discussions of how respondents understood the concepts of *Fairness* and *Responsibility* within the context of the study. Several write-in responses involved concerns regarding the feasibility of effective risk-reduction. Others mentioned the predictability of risk's incidence, whether the risk involved instant and/or certain death, and whether respondents felt that they were personally affected by the risk.<sup>23</sup> An alternative survey design based solely on open-ended responses could provide richer insights into the multitude of factors that shape respondents' subjective beliefs about risks, though such designs pose their own limitations in terms of motivating respondents to provide detailed input and then reliably coding their answers.

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<sup>22</sup> In principle, one could attempt to code survey indices for the attributes in Table S10 using the pairwise-comparison method developed in the paper. But adding too many survey indices to the analysis would quickly exhaust statistical power, especially given how many of these attributes are likely to be highly-correlated with one other.

<sup>23</sup> The full write-in data are included with the paper's replication materials.

## Section 11. Documentation for public spending data referenced in the paper

According to the Congressional Budget Office (2017), the U.S. federal government spent \$3.9 trillion in FY 2016. That spending included:

- \$57 billion in discretionary spending on health care and \$1,116 billion in mandatory spending on Medicare and Medicaid.
- \$584 billion in discretionary spending for the Defense Department, including base budget plus overseas contingency operations; \$68 billion in discretionary spending for veterans' affairs; \$107 billion in mandatory spending for veterans' affairs; \$52 billion in discretionary spending on international affairs; \$54 billion for military retirement; and \$54 billion in discretionary spending on the National Intelligence Program<sup>24</sup> (Director of National Intelligence 2016). Since this does not account for pensions paid to civilian personnel in the national security sector (which are not explicitly distinguished from other pensioners in mandatory spending), it is likely that this figure undercounts the true annual cost of national security expenditures.
- \$910 billion for Social Security. This figure does not include \$304 billion in mandatory spending on income security programs such as the earned income tax credit, the supplemental nutrition assistance program, or supplemental security income.

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<sup>24</sup> This does not include \$18 billion in intelligence funding appropriated through the U.S. military.

## **Section 12. Documentation of mortality figures referenced in the paper’s main text**

On how *assault weapons kill 100-200 Americans per year*, see Beckett (2014) and Wing (2016), among others. The Federal Bureau of Investigations (2014) attributes roughly 250-350 deaths per year to rifles. Assault rifles would be a subset of this.

On *comparing fatality rates from motorcycles versus terrorism*: According to the National Traffic and Highway Safety Administration (2015), the fatality rate among motorcycle riders averaged 64 deaths per 100,000 registered vehicles from 2004-2013. Over that same period, the Global Terrorism Database (START 2017) records 135 Americans killed by terrorists. This count includes attacks by animal rights activists, anti-abortion activists, anti-government activists, white supremacists, and many other kinds of terrorism besides those committed by jihadists. With a U.S. population of 330 million people, this is a rate of 0.004 deaths per 100,000 people. If we limit the definition of “terrorism” to attacks perpetrated by jihadists – as this is the primary form of terrorism that Americans appear to be concerned with – then the rate at which Americans were killed by terrorists on U.S. soil between 2004-2013 (20 deaths total) was 100,000 times less than the rate of motorcycle fatalities. Mueller and Stewart (2016, 138) estimate the annual risk of Americans dying in a terrorist attack between 2002-2013 as 1 in 110,000, which would be 65,000 times less than the fatality rate suffered by motorcycle riders. Mueller and Stewart estimate the annual risk of Americans dying in a terrorist attack between 1970-2013 as 1 in 4 million, which would be 2,400 times less than current the motorcycle fatality rate.

On how *shootings are the third-largest cause of death for Americans children*, see Fowler et al. (2017).

On how *cancer kills about as many Americans every year as the total number of U.S. soldiers*

*who have died in all the country's foreign wars combined:* The Centers for Disease Control recorded 595,930 cancer deaths in 2015. According to DeBruyne (2017), the United States suffered 646,734 deaths (including non-combat deaths) in wars and other combat operations from 1776 through April 2017, excluding the Civil War but including the War of Independence.

On the rise of *opioid-related deaths in the United States over the past 15 years*, see National Institute on Drug Abuse (2017).

### **Section 13. Documentation of media mentions data**

The media mentions data described in the paper and in this supplement were gathered from keyword searches of all U.S. newspaper articles in the LexisNexis database that appeared in the two years prior to launching the survey. Table S12 lists these data, along with the keywords searches used to generate them. The “media mentions” index is the sum of all articles that met these search criteria which also contained the word “risk.” The index ranges from 29 mentions for solar flares to 18,117 mentions for warfare. The average risk received 2,401 mentions according to these data (standard deviation 3,320).

<b>Risk</b>	<b>Keywords</b>	<b>Media mentions</b>
Air pollution	air & pollut!	2610
Air warfare	air & (war   warfare)	3642
Alcohol use	alcohol!	6697
Alzheimer's disease	alzheimers!	1803
Arthritis	arthrit!	97
Artificial intelligence	artificial & intelligent!	1061
Asteroid collision	asteroid	416
Asthma	asthma!	1335
Bacterial infections	bacteria! & infect!	1762
Benign tumors	tumor! & benign	149
Bicycle accidents	bicycl! & accident!	470
Biological terrorism	terroris! & biolog!	322
Birth defects	birth! & defect!	1430
Blood disorders	blood & (disease disorder)	7279
Bone diseases	bone & disease/disorder	1880
Cancer	cancer!	11666
Car accidents	(car & accid!) (car & crash)	4881
Chemical spills	chemical & spill!	401
Child abuse	child abuse	1744
Choking	chok!	1534
Climate change	climate change   global warming	5360
Complications from pregnancy / childbirth	pregnan! Or childbirth	6516
Construction accidents	construction & accident!	1105
Contaminated drinking water	contamin! & drink!	1137
Cyberattacks	cyber!	6332
Diabetes	diabet!	4997
Drought	drought	2650
Drownings	drown!	1531
Drunk driving	drunk & driv!	737
Earthquakes	earthquake	1800
Epilepsy	epilep!	392
Exposure to cold	cold & expos! & temp!	337
Extraterrestrials	extraterrestrial   (alien AND space)	285
Extreme weather	extreme & weather	1551
Falling	"fall down"   "fell down"   "fall off"   "fell off"	713
Fire exposure / smoke inhalation	fire   (smoke & inhal!) "firearms injuries"   shooting!   "gun violence"	17335
Firearms injuries	violence"	8703
Floods	flood! & water	3028
Food poisoning	food & poison!	787
Food shortage	food & short!	4768

**Table S11.** Documentation of media mentions data

<b>Risk</b>	<b>Keywords</b>	<b>Media mentions</b>
Fungal infections	fung! & infect!	244
Gallbladder / pancreas disorders	(gallbladder pancrea!) & (disease disorder)	511
Gang violence	gang & violen!	1158
Heart disease	heart & (disease disorder)	8184
Heat waves	heat wave	509
Hepatitis	hepatitis	746
Hernias	hernia	129
High-energy physics experiments	(high energy & physics)   (particle & accelerator)	32
HIV/AIDS	hiv   aids   hiv/aids	10374
Homicides	homicid!   murder!	6349
Huntington's disease	huntington's disease	58
Hurricanes	hurricane & wind	539
Illicit drug overdoses	overdose! & drug	1979
Infant mortality	infant mortality	370
Influenza / pneumonia	influenza   flu   pneumonia	2093
Infrastructure collapse	infrastructur! & (collaps! fail)	1016
Intestinal disorders	intestin! & (disease disorder)	488
Kidney diseases	kidney & (disease disorder)	1565
Land warfare	(land   ground) & (war   warfare)	5002
Landslides	landslide & (rock   mud)	180
Lethal force used by police	(police & lethal)   "police shooting"	907
Liver diseases	liver & (disease disorder)	1153
Lung diseases	lung & (disease disorder)	2217
Lupus	lupus	121
Malnutrition	malnutrit!	379
Medical errors / malpractice	medical & (error   malpract!)	1401
Metabolic disorders	metabol! & (disease disorder) (motorcycle & accident) OR	811
Motorcycle accidents	(motorcycle & crash)	457
Multiple sclerosis	multiple sclerosis	403
Nanotechnology	nanotech!	113
Naval warfare	(sea   nav!) & (war   warfare)	3260
Nuclear meltdowns	nuclear & meltdown	159
Nuclear war	nuclear & war	2088
Obesity	obesity	2444
Opioid / heroin overdoses	overdose! & (opioi!   opia!   heroin)	1690
Pandemics / plagues	pandemic! OR plague!	2272
Parkinson's disease	parkinson's disease	483
Pedestrian accidents	pedestrian   accid!	531
Pesticides	pesticid!	1327
Poisoning	poison!	2574

**Table S11.** *Documentation of media mentions data*

<b>Risk</b>	<b>Keywords</b>	<b>Media mentions</b>
Post-traumatic stress disorder (PTSD)	stress & (post-traum!   posttraum!)	738
Prescription drug overdoses	overdose! & drug! & prescri!	1273
Rioting	riot!	1174
Second-hand smoke exposure	smok! & (secondhand   second-hand   second hand)	264
Smoking	smoking   smoker	4193
Solar flares	solar & flare!	29
Spinal diseases	(spine spinal) & (disease disorder)	856
Stomach diseases	stomach & (disease disorder)	1010
Strokes	stroke!	3629
Suicides	suicid!	4634
Terrorism	terroris!	10497
Thyroid disorders	thyroid! & (disease disorder)	379
Tornadoes	tornado!	778
Train accidents	(train & accident!) (train & crash)	1219
Tsunamis	tsunami!	454
Urinary disorders	urinary & (disease disorder)	404
Volcanic eruptions	volcan!	357
Warfare	war   warfare	18117
Wildfires	wildfire!	1819
Workplace accidents	workplace & accident!	738

**Table S11.** *Documentation of media mentions data*



## **Section 14. Documentation of case selection and mortality statistics**

The 100 risks examined in this study reflect two main categories. The first category comprises risks that killed at least 1,000 Americans in 2015. This category accounts for 69 out of the 100 risks in the data set. The second category of risks in the data set comprises catastrophic risks and natural disasters. This category accounts for 31 out of the 100 risks in the data set. This list was derived from studies of catastrophic risk by Posner (2004), Sunstein (2007), and Bostrom and Cirkovic (2011). These risks are marked with asterisks in the table below.

Table S12 lists each risk along with a mortality estimate and documentation for that mortality estimate. Most mortality estimates are based on official data gathered by the Centers for Disease Control (2017). These data reflect the underlying causes of death listed on Americans' birth certificates. CDC mortality data are listed with respect to the 10<sup>th</sup> revision of the International Classification of Disease codes (ICD-10). The following table contains the ICD-10 codes used to generate mortality estimates for each risk. Most CDC mortality estimates refer to the year 2015, the last year for which data were available at the time the survey was conducted. Data that rely on non-CDC sources were selected to reflect estimates as close as possible to 2015.

Name	Mortality estimate	Source
Air pollution	200,000	Caiazzo et al. (2013).
Air warfare *	17	Members of the U.S. Air Force killed in action in 2015, according to the <i>Military Times</i> ' "Honor the Fallen" data ( <a href="http://thefallen.militarytimes.com/">http://thefallen.militarytimes.com/</a> , accessed 8/2/17). Air, Land, and Naval warfare are divided into separate categories given that the federal budget explicitly partitions these expenditures.
Alcohol use	43,138	CDC data, ICD categories F10, G31.2, G62.1, G72.1, I42.6, K29.2, K70, K85.2, K86, R78.0, X45, X65, Y15*, plus drunk driving (see below).
Alzheimer's disease	110,561	CDC data, ICD category G30.
Arthritis	2,945	CDC data, ICD category M0-M14.
Art. intelligence *	0	No recorded lethal events found.
Asteroid collision *	0	No recorded lethal events found.
Asthma	3,615	CDC data, ICD category J45-J46.
Bacterial infections	43,060	CDC data, ICD category A20-A49.
Benign tumors	1,535	CDC data, ICD category D10-D36.
Bicycle accidents	1,013	CDC data, ICD category V10-V19.
Bio. terrorism *	0	No recorded lethal events found. This risk is included along with the broader "terrorism" category given how "engineered pandemics" receive particularly extensive attention in literature on catastrophic risk. The set of actors that could plausibly conduct a large-scale bioterrorism attack is also only partially-overlapping with the set of actors that are generally associated with the current wave of jihadist-inspired terrorism.
Birth defects	10,017	CDC data, ICD category Q00-Q99.
Blood disorders	7,907	CDC data, ICD category D60-D76.
Bone diseases	2,972	CDC data, ICD category M80-M94.
Cancer	595,930	CDC data, ICD category C00-C97.
Car accidents	19,928	CDC data, ICD category V40-V59, V87-V87.3, V89.2.
Chemical spills *	161	CDC data, ICD category X49, Y19.
Child abuse	1,585	Children's Bureau, U.S. Dept. of Health and Human Services, <i>Child Maltreatment 2015</i> (January 19, 2017), accessed 8/2/17 at <a href="https://www.acf.hhs.gov/cb/resource/child-maltreatment-2015">https://www.acf.hhs.gov/cb/resource/child-maltreatment-2015</a> .
Choking	4,776	CDC data, ICD category W79-W80.

**Table S12.** *Documentation of risks and mortality data*

Name	Mortality estimate	Source
Climate change*	0	No recorded lethal events found: it is possible that some extreme weather (1,337 deaths in 2015) resulted from climate change, but it seems impossible to make this attribution scientifically.
Complications from pregnancy / childbirth	1,140	CDC data, ICD category O00-O99.
Constr. accidents	937	Bureau of Labor Statistics, U.S. Department of Labor, <i>Occupational Injury Data 2015</i> . [Though this figure falls below 1,000 deaths, BLS data likely undercount injuries, because they only reflect data on filed claims.]
Contaminated drinking water*	100	CDC data on "drinking water-associated outbreak surveillance) attributes roughly 5-10 deaths per year to unsafe drinking water, though these data stop in 2012. ( <a href="https://www.cdc.gov/healthywater/surveillance/drinking-surveillance-reports.html">https://www.cdc.gov/healthywater/surveillance/drinking-surveillance-reports.html</a> , accessed 8/2/17). This figure is likely to substantially underreport mortality as a result of the inherent difficulty of monitoring the problem. 2015 would have been an unusually-acute year for this risk given the declaration of a public health emergency regarding drinking water in Flint, Michigan, though only 15 deaths have thus far been attributed to that incident.
Cyberattacks*	0	No recorded lethal events found.
Diabetes	79,535	CDC data, ICD category E10-E14.
Drought*	0	No recorded events found: CDC data (ICD cat. X54) lists 4 deaths in 2015 from "insufficient water intake", but this is not necessarily connected to drought per se
Drownings	3,609	CDC data, ICD category W65-W74.
Drunk driving	9,967	National Highway Traffic Safety Administration, U.S. Dept. of Transportation, <i>Alcohol-Impaired Driving</i> (December 2015) accessed 8/2/17 at <a href="https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812231">https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812231</a> .
Earthquakes	15	CDC data, ICD category X36.
Epilepsy	2,400	CDC data, ICD category G40-G41.
Exposure to cold	815	CDC data, ICD category X31.
Extraterrestrials*	0	No recorded lethal events found.
Extreme weather	1,337	CDC data, ICD category X30-X39.
Falling	33,389	CDC data, ICD category W00-W19.
Fire / smoke	2,646	CDC data, ICD category X00-X09.
Firearms injuries	33,736	CDC data (2014): accessed 8/2/17 at <a href="https://www.cdc.gov/nchs/fastats/injury.htm">https://www.cdc.gov/nchs/fastats/injury.htm</a> [NB: CDC discontinued reporting firearms injuries data in 2015].

**Table S12 (continued).** *Documentation of risks and mortality data*

Name	Mortality estimate	Source
Floods*	74	CDC data, ICD category X38.
Food poisoning	3,000	CDC data feature on "Foodborne Germs and Illnesses": accessed 8/2/17 at <a href="https://www.cdc.gov/foodsafety/foodborne-germs.html">https://www.cdc.gov/foodsafety/foodborne-germs.html</a> .
Food shortage*	0	No recorded lethal events found. [Note that food shortage differs from malnutrition in the sense that, while malnutrition is a chronic risk (which kills more than 1,000 Americans per year in its own right) a general collapse of the food supply reflects an additional, catastrophic risk.]
Fungal infections	1,037	CDC data, ICD category B35-B49.
Gall./panc. disorder	8,837	CDC data, ICD category K80-K86.
Gang violence	2,500	National Gang Center, U.S. Dept. of Justice, <i>National Youth Gang Survey Analysis</i> (2012): accessed 8/2/17 at <a href="https://www.nationalgangcenter.gov/Survey-Analysis/Measuring-the-Extent-of-Gang-Problems">https://www.nationalgangcenter.gov/Survey-Analysis/Measuring-the-Extent-of-Gang-Problems</a> . NGC estimates that 13% of homicides are gang related, and reports 2,363 gang-related homicides from 2012.
Heart disease	666,042	CDC data, ICD category I00-I51.
Heat waves	339	CDC data, ICD category X30.
Hepatitis	7,461	CDC data, ICD category B15-B19.
Hernias	2,109	CDC data, ICD category K40-K46.
High-energy physics*	0	No recorded lethal events found.
HIV/AIDS	6,465	CDC data, ICD category B20-B24.
Homicides	17,525	CDC data, ICD category X85-Y09.
Hungtn's disease	1,053	CDC data, ICD category G10.
Hurricanes	54	CDC data, ICD category X37.
Illicit drugs	21,823	National Institute on Drug Abuse, <i>Overdose Death Rates</i> (January 2017): online at <a href="https://www.drugabuse.gov/related-topics/trends-statistics/overdose-death-rates">https://www.drugabuse.gov/related-topics/trends-statistics/overdose-death-rates</a> , accessed 8/2/17.
Infant mortality	23,210	CDC data on "infant deaths" ( <a href="https://www.cdc.gov/nchs/fastats/infant-health.htm">https://www.cdc.gov/nchs/fastats/infant-health.htm</a> , accessed 8/2/17).
Influenza / pneumonia	57,062	CDC data, ICD category J09-J18.
Infr. collapse*	0	No recorded lethal events found.
Intestinal disorders	32,730	CDC data, ICD category A00-09, K50-K63.
Kidney diseases	53,946	CDC data, ICD category N10-19, N25-28.

**Table S12 (continued).** *Documentation of risks and mortality data*

Name	Mortality estimate	Source
Land warfare*	7	Members of the U.S. Army killed in action in 2015, according to the <i>Military Times'</i> "Honor the Fallen" data ( <a href="http://thefallen.militarytimes.com/">http://thefallen.militarytimes.com/</a> , accessed 8/2/17). Air, Land, and Naval warfare are divided into separate categories given that the federal budget explicitly partitions these expenditures.
Landslides*	15	CDC data, ICD category X36.
Lethal force used by police	991	Washington Post data on police shootings ( <a href="https://www.washingtonpost.com/graphics/national/police-shootings/">https://www.washingtonpost.com/graphics/national/police-shootings/</a> , accessed 8/2/17) count 991 people killed by U.S. police in 2015. Because the authors of this study argue that their tally likely underreports data, the magnitude of this risk is considered to exceed 1,000 deaths for the year.
Liver diseases	52,866	CDC data, ICD category K70-K76.
Lung diseases	271,229	CDC data, ICD category J00-J98.
Lupus	3,114	National Institutes of Health, Global Disease Burden Data (2013).
Malnutrition	5,010	CDC data, ICD category E40-E46.
Medical errors / malpractice	251,454	Makary and Daniel (2016).
Metabolic disorders	23,254	CDC data, ICD category E70-E88.
Motorcycles	4,492	CDC data, ICD category V20-V29.
Multiple sclerosis	4,198	CDC data, ICD category G35.
Nanotechnology*	0	No recorded lethal events found.
Naval warfare*	4	Members of the U.S. Navy killed in action in 2015, according to the <i>Military Times'</i> "Honor the Fallen" data ( <a href="http://thefallen.militarytimes.com/">http://thefallen.militarytimes.com/</a> , accessed 8/2/17). Air, Land, and Naval warfare are divided into separate categories given that the federal budget explicitly partitions these expenditures.
Nuclear meltdowns*	0	No recorded lethal events found.
Nuclear war*	0	No recorded lethal events found.
Obesity	7,431	CDC data, ICD category E65-E68.
Opioid / heroin overdoses	33,091	National Institute on Drug Abuse, <i>Overdose Death Rates</i> (January 2017): online at <a href="https://www.drugabuse.gov/related-topics/trends-statistics/overdose-death-rates">https://www.drugabuse.gov/related-topics/trends-statistics/overdose-death-rates</a> , accessed 8/2/17.

**Table S13 (continued).** Documentation of risks and mortality data

Name	Mortality estimate	Source
Pandemics / plagues*	0	The World Health Organization did not record any diseases that rose to the level of a “pandemic” in 2015.
Parkinson's disease	27,793	CDC data, ICD category G20.
Pedest. accidents	6,678	CDC data, ICD category V01-V09.
Pesticides*	4	CDC data, ICD category X48.
Poisoning	51,966	CDC data feature, <i>All injuries</i> ( <a href="https://www.cdc.gov/nchs/fastats/injury.htm">https://www.cdc.gov/nchs/fastats/injury.htm</a> , accessed 8/2/17).
Post-traumatic stress disorder (PTSD)	1,262	National Institutes of Health, Global Disease Burden Data (2013).
Prescription drug overdoses	29,728	National Institute on Drug Abuse, <i>Overdose Death Rates</i> (January 2017): online at <a href="https://www.drugabuse.gov/related-topics/trends-statistics/overdose-death-rates">https://www.drugabuse.gov/related-topics/trends-statistics/overdose-death-rates</a> , accessed 8/2/17.
Rioting*	0	No recorded lethal events found. Though several cities in the United States experienced mass protests following police shootings of unarmed black men, none of these protests directly resulted in death of their own.
2nd-hand smoke	41,000	CDC data feature, <i>Smoking &amp; Tobacco Use</i> ( <a href="https://www.cdc.gov/tobacco/data_statistics/fact_sheets/fast_facts/">https://www.cdc.gov/tobacco/data_statistics/fact_sheets/fast_facts/</a> , accessed 8/2/17).
Smoking	439,000	CDC data feature, <i>Smoking &amp; Tobacco Use</i> ( <a href="https://www.cdc.gov/tobacco/data_statistics/fact_sheets/fast_facts/">https://www.cdc.gov/tobacco/data_statistics/fact_sheets/fast_facts/</a> , accessed 8/2/17).
Solar flares*	0	No recorded lethal events found.
Spinal diseases	1,417	CDC data, ICD category M40-M54.
Stomach diseases	6,351	CDC data, ICD category K20-K31.
Strokes	140,323	CDC data, ICD category I60-I69.
Suicides	44,145	CDC data, ICD category X60-X84.
Terrorism*	31	Victims of terrorist attacks on U.S. soil in 2015 (not including terrorist deaths) are: Charleston (9), Chattanooga (5), Colorado Springs (3), and San Bernadino (14). Note that this figure would be only marginally higher -- 59 -- if all U.S. soldiers killed in action overseas in 2015 were also considered to have been killed by "terrorists".
Thyroid disorders	1,949	CDC data, ICD category E00-E07.
Tornadoes*	36	Storm Prediction Center, NOAA/National Weather Service, <i>2015 Preliminary Killer Tornadoes</i> ( <a href="http://www.spc.noaa.gov/climo/torn/STATIJ15.txt">http://www.spc.noaa.gov/climo/torn/STATIJ15.txt</a> , accessed 8/2/17).
Train accidents*	28	CDC data, ICD category V81.

**Table S13 (continued).** *Documentation of risks and mortality data*

<b>Name</b>	<b>Mortality estimate</b>	<b>Source</b>
Tsunamis*	0	No recorded lethal events found.
Urinary disorders	12,779	CDC data, ICD category N30-N39.
Volcanic eruptions*	0	No recorded lethal events found.
Warfare*	28	Members of the U.S. armed forces killed in action in 2015, according to the <i>Military Times</i> ' "Honor the Fallen" data ( <a href="http://thefallen.militarytimes.com/">http://thefallen.militarytimes.com/</a> , accessed 8/2/17).
Wildfires*	13	National Interagency Fire Center, <i>Wildland Fatalities by Year</i> : accessed 8/2/17 at <a href="https://www.nifc.gov/safety/safety_documents/Fatalities-by-Year.pdf">https://www.nifc.gov/safety/safety_documents/Fatalities-by-Year.pdf</a> .
Work. accidents	4,826	Bureau of Labor Statistics, U.S. Department of Labor, <i>Occupational Injury Data 2015</i> .

**Table S13 (continued).** *Documentation of risks and mortality data*

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