

Thomas Petersen

Nuclear Energy and the Perception of Risk in Germany

Jahrestagung Kerntechnik 2013

Berlin, Hotel Estrel

1. Risks and Probabilities

Risks in Life

Risk of being robbed in your own home at least once during your lifetime	0.3
Risk of dying of cancer	0.25
Risk of dying in a traffic accident	0.01
Risk of being murdered.....	0.001
Risk of being killed in a natural catastrophe	0.0001
Risk of being struck by lightning	0.00006
Risk of dying of Creutzfeldt-Jakob disease (in England, as of the year 2000, if the epidemic continues at the present rate for the next 80 years).....	0.00005
Probability of winning the lottery jackpot, if you play once a week for 80 years.....	0.00003

Sources: Federal Office of Statistics, Federal Criminal Police Office (BKA), FDP Regional Office in Lower Saxony, Wikipedia

Lottery Players

QUESTION: "Do you play the lottery regularly or only now and then, or don't you normally play the lottery at all?"

	Population 16 and over
	%
Play the lottery.....	42
Don't play the lottery.....	57
No response	1
	<hr/>
	100

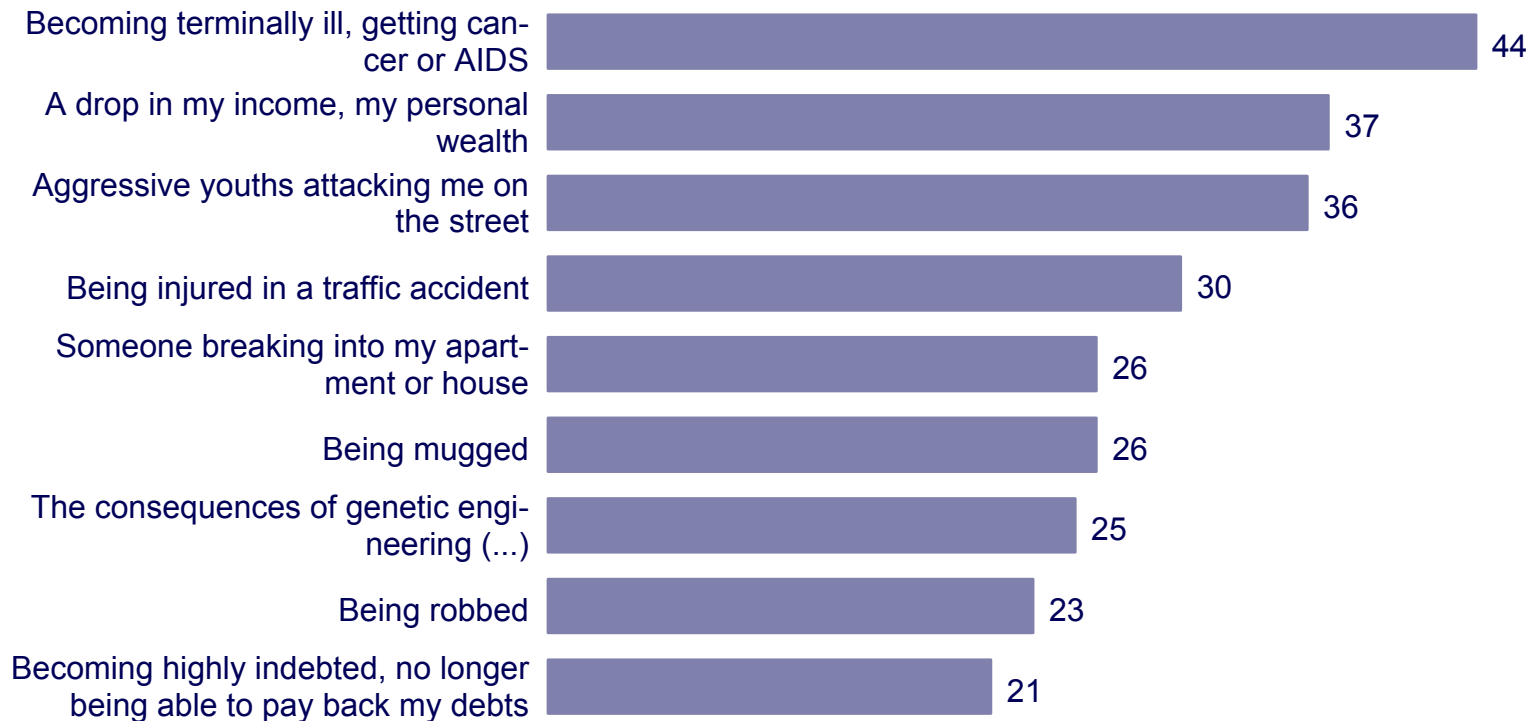
Playing the Lottery More When There Is a Large Jackpot

QUESTION to all lottery players: "When there is a large lottery jackpot, do you play the lottery more than you normally would, do you spend more on the the lottery, or don't you do that?"

	Lottery players
	%
Play more, spend more on the lottery	39
Don't do that	58
No response	3
	<hr/>
	100

Fears - I

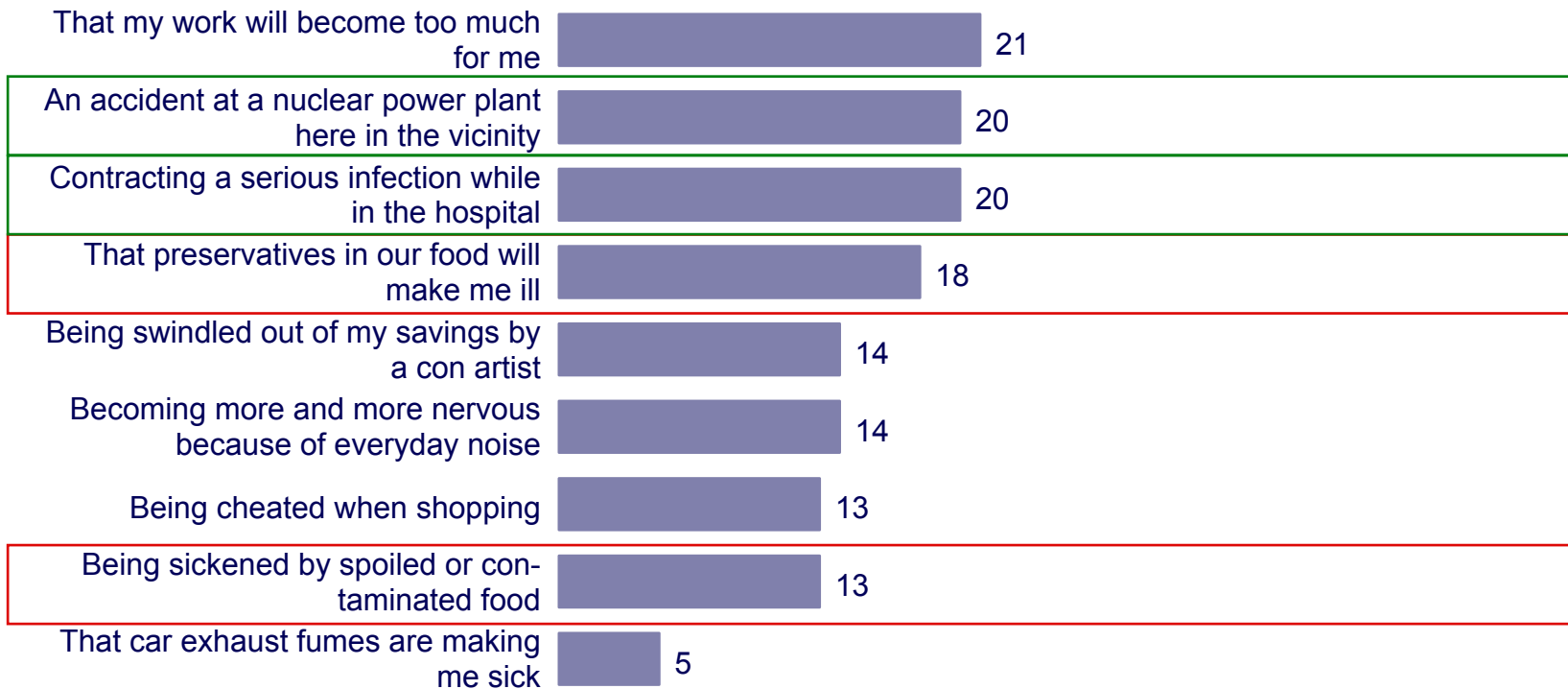
QUESTION: "Have you ever worried recently about any of the things shown here on this list? (Presentation of a list)"



Source: Allensbach Archives, IfD Survey 10079, September 2011

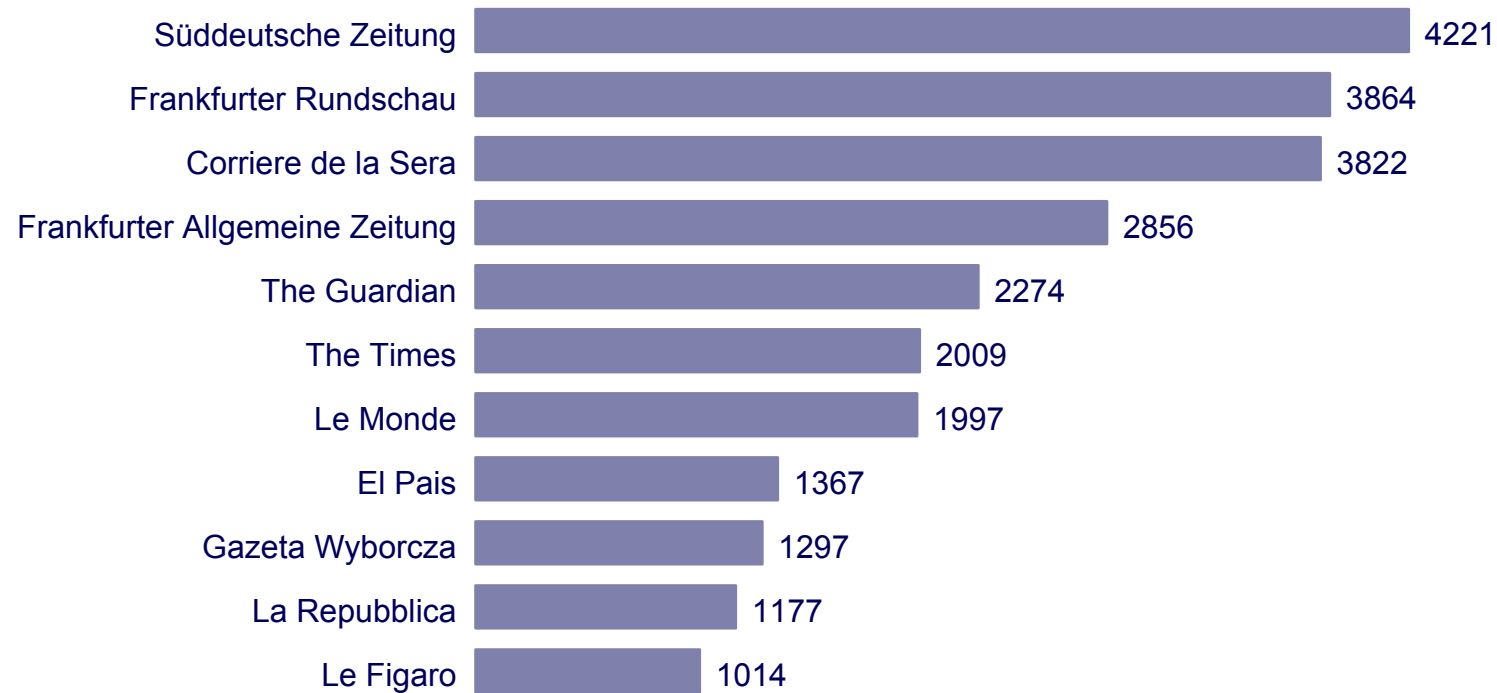
Fears - II

QUESTION: "Have you ever worried recently about any of the things shown here on this list? (Presentation of a list)"



Alarmism in Media Reporting from 2000 - 2010

Frequency with which the terms "BSE," "dioxin-contaminated," "swine flu" and "asbestos-contaminated" were used in reports published in –



Source: Walter Krämer: *Die Angst der Woche. Warum wir uns vor den falschen Dingen fürchten*. Munich: Piper, 2011, p. 48

2. Cultural Pessimism and Skepticism of Technology

The Majority Believes Life Is Becoming More Dangerous

QUESTION: "People have different opinions on whether life in current times is more dangerous than it was 20 or 30 years ago. What do you think: is life in our times now more dangerous on the whole than it was 20 or 30 years ago, or is it less dangerous, or hasn't there been very much change in that regard?"

	Total population	Western Germany	Eastern Germany
	%	%	%
Life now is more dangerous	49	47	58
Life now is less dangerous	12	13	5
Hasn't been very much change	31	32	30
Undecided, don't know	8	8	7
	<u>100</u>	<u>100</u>	<u>100</u>

Source: Allensbach Archives, IfD Survey 10079, September 2011

Progress as a Risk

QUESTION: "Do you believe that technical progress entails more security or more risks?"

	Population 16 and over
	%
More security	25
More risks	43
Undecided	32
	<hr/> 100

Belief in Progress

QUESTION: "Do you believe in progress—I mean, that humanity is constantly advancing towards a better future—or don't you believe that?"

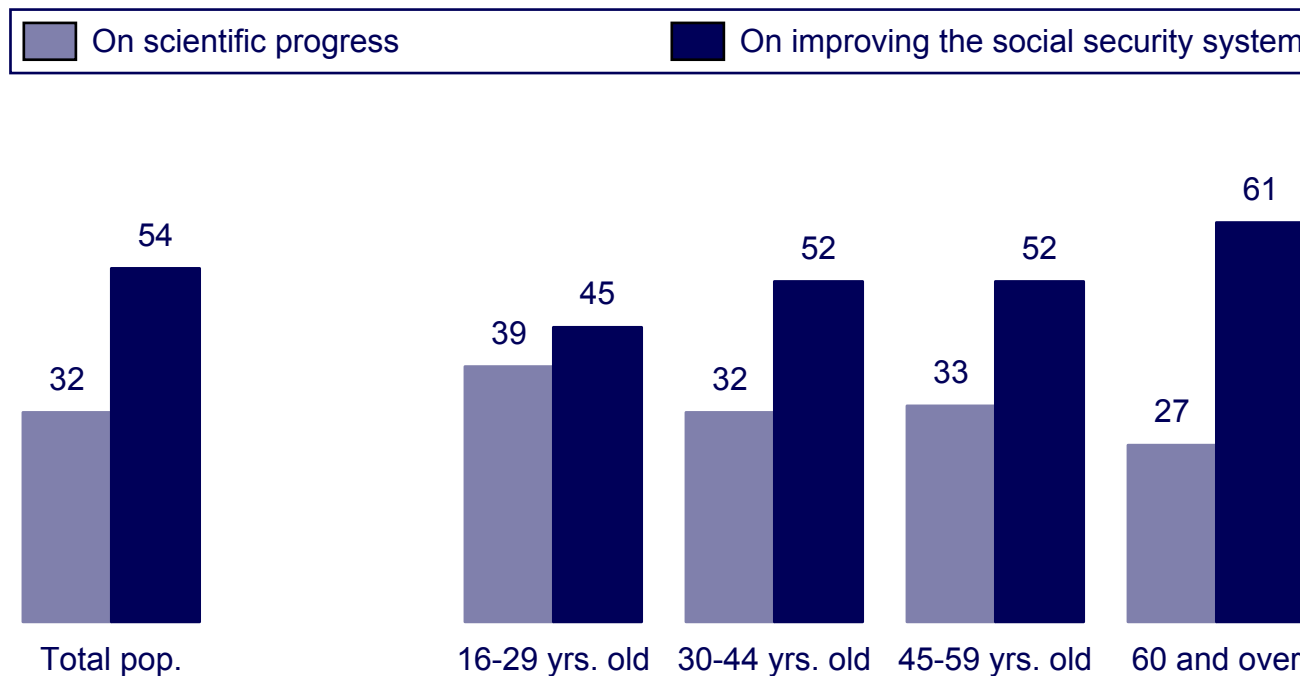
- Western Germany -



Source: Allensbach Archives, IfD Surveys

What Is More Important: Research or Social Security?

QUESTION: "If you could have it your way, should we generally spend more money on scientific progress or on improving the social security system here in Germany?"



Source: Allensbach Archives, IfD Survey 10071, May 2011

Doing Without Progress Is Better Than Accepting Risks

QUESTION: "Two people are talking here about technical progress. Which of the two comes closest to saying what you think too, the one above or the one below?"
(Presentation of an illustration)

	Population 16 and over %
In my opinion, we have to be willing to accept certain risks when employing new technical developments. You can never completely eliminate all risks	35
I take a different view. Even if they entail only a slight risk for people, it would be better to do without new technical developments.....	52
Undecided	13
	<hr/> 100

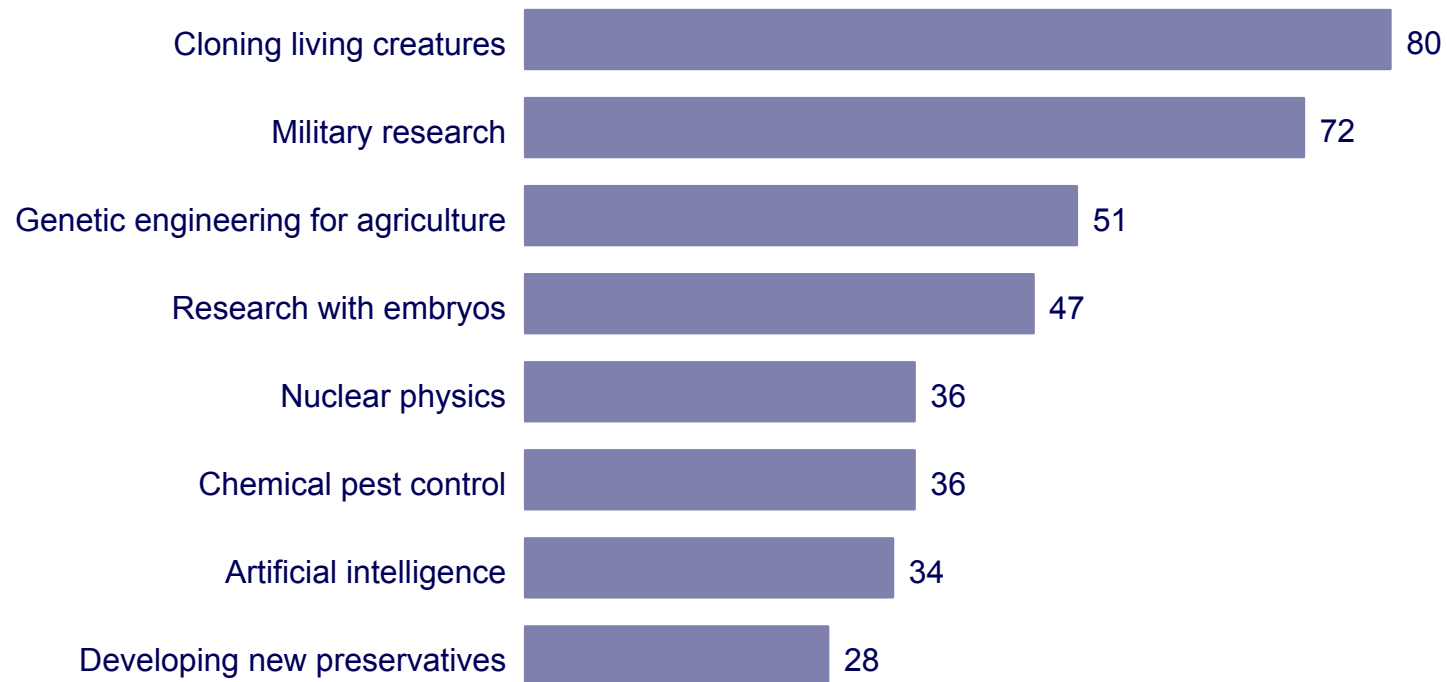
Banning Research

QUESTION: "Many people worry that research can sometimes obtain dangerous results. If it were possible to ban certain kinds of research, would you be for or against that?"

	Population 16 and over
	%
For	67
Against	16
Undecided	17
	<hr/> 100

Desire to Ban Research – I

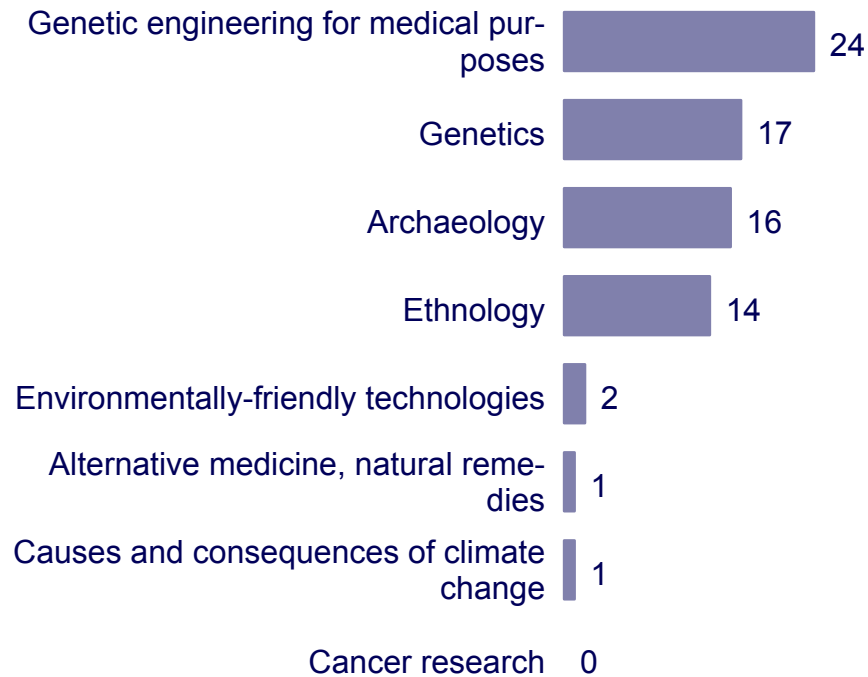
QUESTION: "Various fields of research are shown here on these cards (...). In which areas do you think research should be stopped completely?" (Presentation of a stack of cards)



Source: Allensbach Archives, IfD Survey 10071, May 2011

Desire to Ban Research – II

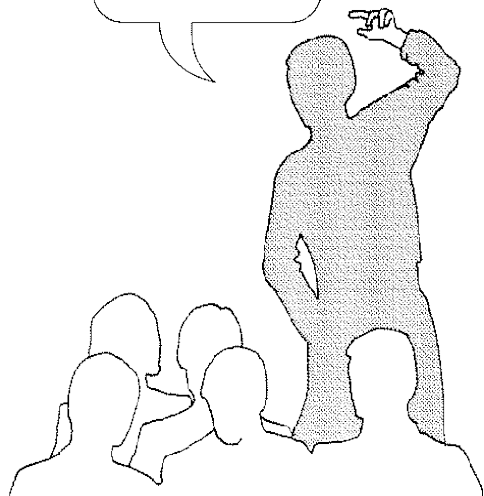
QUESTION: "Various fields of research are shown here on these cards (...). In which areas do you think research should be stopped completely?" (Presentation of a stack of cards)



3. The Allure of the Irrational

Nuclear Energy Is a Morally Loaded Issue

"What do I care about numbers and statistics in this context! How can you even talk so coldly about such an issue when our health and our lives are at stake!"



QUESTION: "I would like to tell you now about something that happened recently at a panel discussion on the safety of nuclear power plants. A few experts were talking about the risks, the current state of research and safety measures at nuclear power plants. Suddenly, someone in the audience jumps up and shouts something. If you could read this please." (Presentation of an illustration) – "Would you say this person is right or isn't he right?"

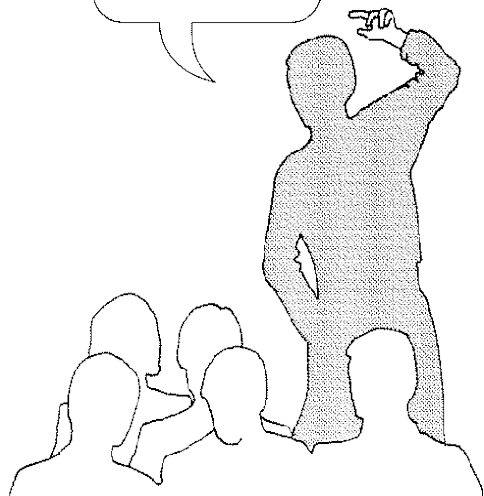
	Total population %	Western Germany %	Eastern Germany %
He's right.....	65	65.....	64
He's not right.....	13	12.....	21
Impossible to say	22	23.....	15
	<u>100</u>	<u>100</u>	<u>100</u>

Source: Allensbach Archives, IfD Survey 10058, August 2010

"But I'm scared!"

"What do I care about numbers and statistics in this context! Genetically modified foods just scare me!"

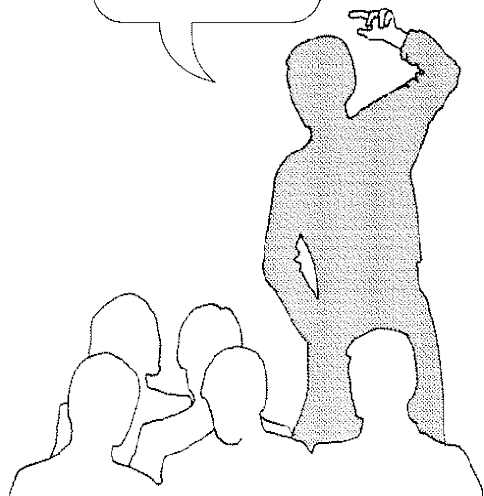
QUESTION: "I would like to tell you now about something that happened recently at a panel discussion on genetically modified foods: A scientist was explaining that studies had shown that genetically modified foods pose no risks to human beings. Suddenly, someone in the audience jumps up and shouts something. If you could read this please." (Presentation of an illustration) – "Would you agree with this person or wouldn't you agree?"



	Total population %	Western Germany %	Eastern Germany %
Would agree with him	57	59.....	49
Would not agree	19	17.....	26
Impossible to say	24	24.....	25
	<u>100</u>	<u>100</u>	<u>100</u>

Irrationality Is More Appealing Than Factual Arguments

"What do I care about numbers and statistics in this context! Genetically modified foods just scare me!"



QUESTION: "I would like to tell you now about something that happened recently at a panel discussion on genetically modified foods: A scientist was explaining that studies had shown that genetically modified foods pose no risks to human beings. Suddenly, someone in the audience jumps up and shouts something. If you could read this please." (Presentation of an illustration) – **"Which of the two spontaneously seems more appealing to you: the scientist or the audience member?"**

	Total population %	Western Germany %	Eastern Germany %
The scientist	14	14.....	13
The audience member.....	63	63.....	66
Impossible to say	23	23.....	21
	<u>100</u>	<u>100</u>	<u>100</u>

"In politics, decisions are made all too often based on factual arguments"

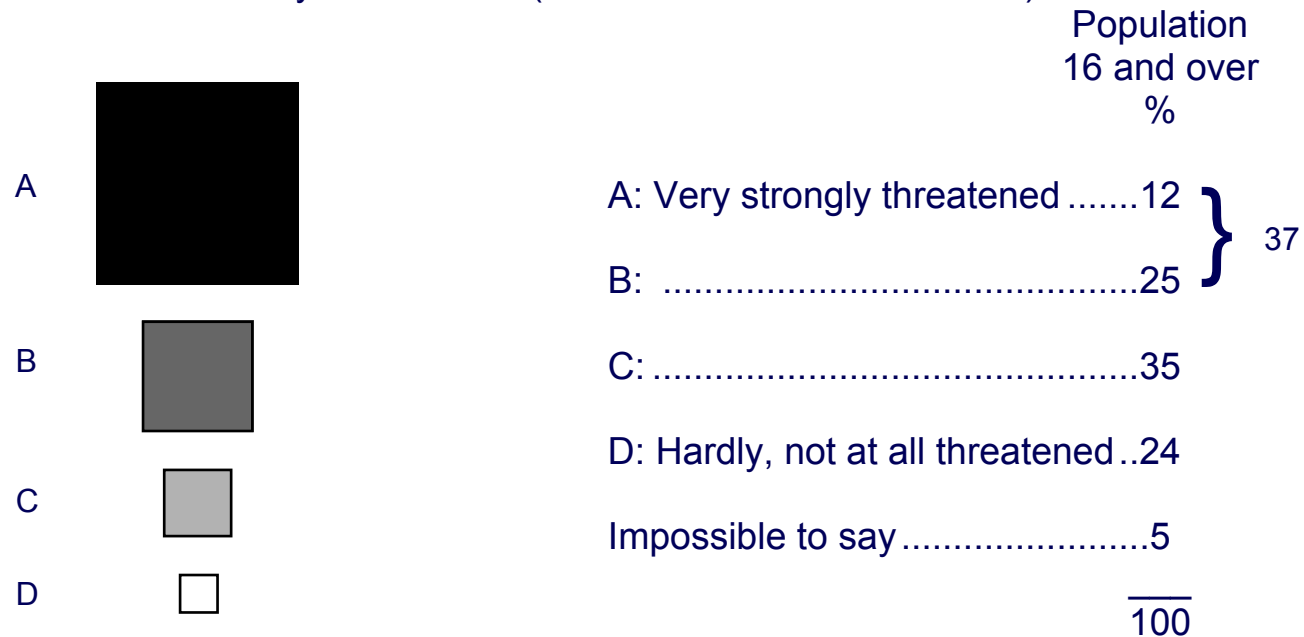
QUESTION: "Someone said to us recently: 'In politics, decisions are made all too often based on factual arguments, and the fears and concerns of the population are overlooked in the process.'
Is that what you think too, or isn't that what you think?"

	Population 16 and over
	%
That's what I think too.....	69
That's not what I think.....	14
Undecided / no response	17
	<hr/> 100

4. Consequences of Fukushima

Threatened?

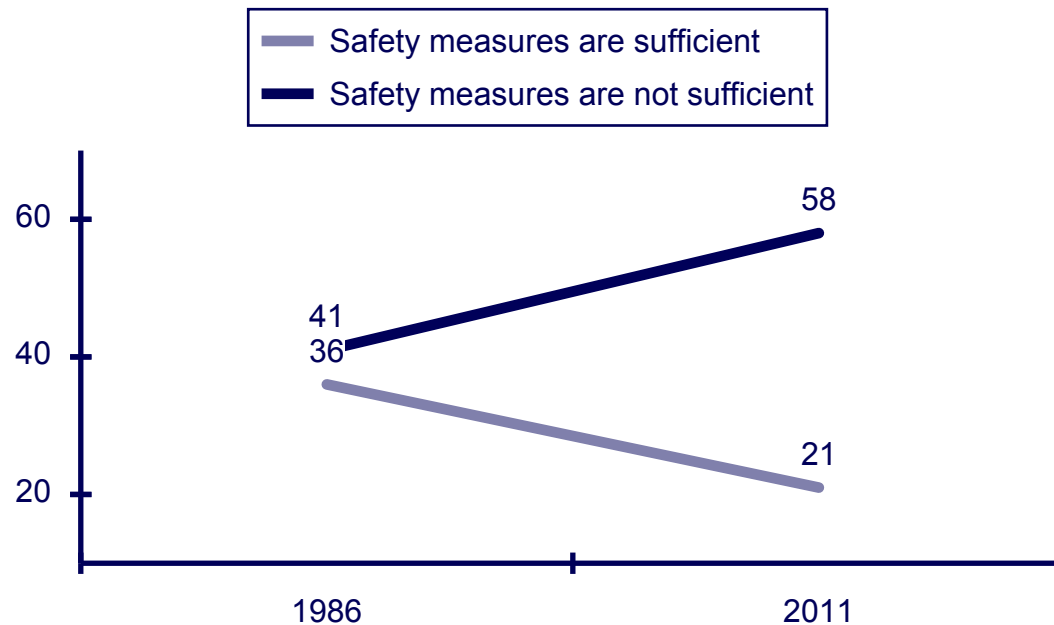
QUESTION: "How threatened do you feel by the accident at the Japanese nuclear power plant in Fukushima? Perhaps you could tell me using the boxes shown here on this sheet. The large box at the top would mean you feel very strongly threatened, while the small box at the bottom would mean you feel hardly or not at all threatened. Which box would you choose?" (Presentation of an illustration)



Source: Allensbach Archives, IfD Survey 10079, September 2011

Confidence in the Safety of German Nuclear Power Plants

QUESTION: "Do you have the impression that sufficient safety measures have been implemented at our nuclear power plants here in Germany, or do you fear that the safety measures are not sufficient?"

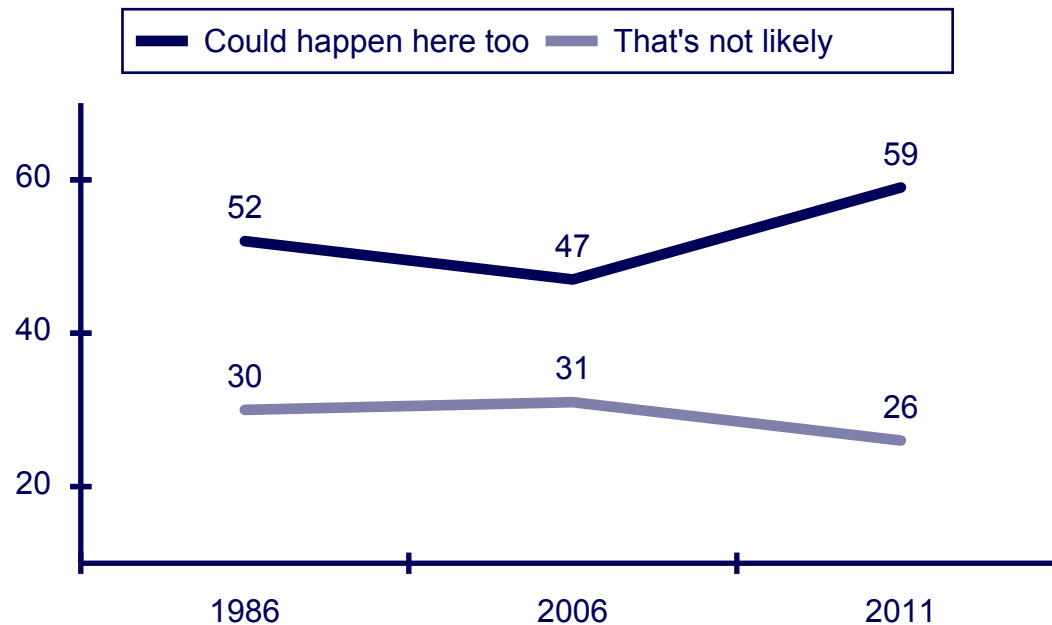


SOURCE: Allensbach Archives, IfD Surveys 4073, 10070

Chernobyl or Fukushima in Germany Too?

QUESTION 1986 und 2006: "What do you think: could an accident like the one in Chernobyl happen here too, or are the nuclear power plants in Germany so safe that that is unlikely?"

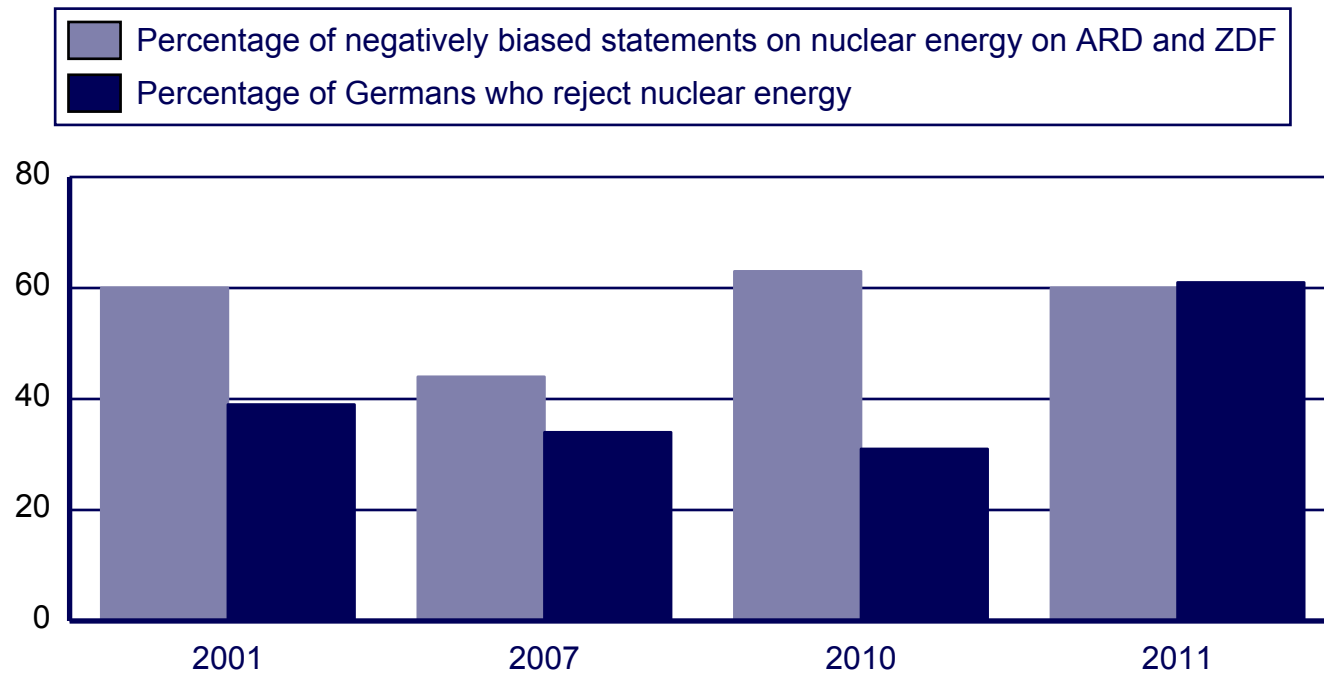
QUESTION 2011: "...accident like the one in Fukushima..."



Source: Allensbach Archives, IfD Surveys 4073, 10070

5. Media Tenor and Public Opinion

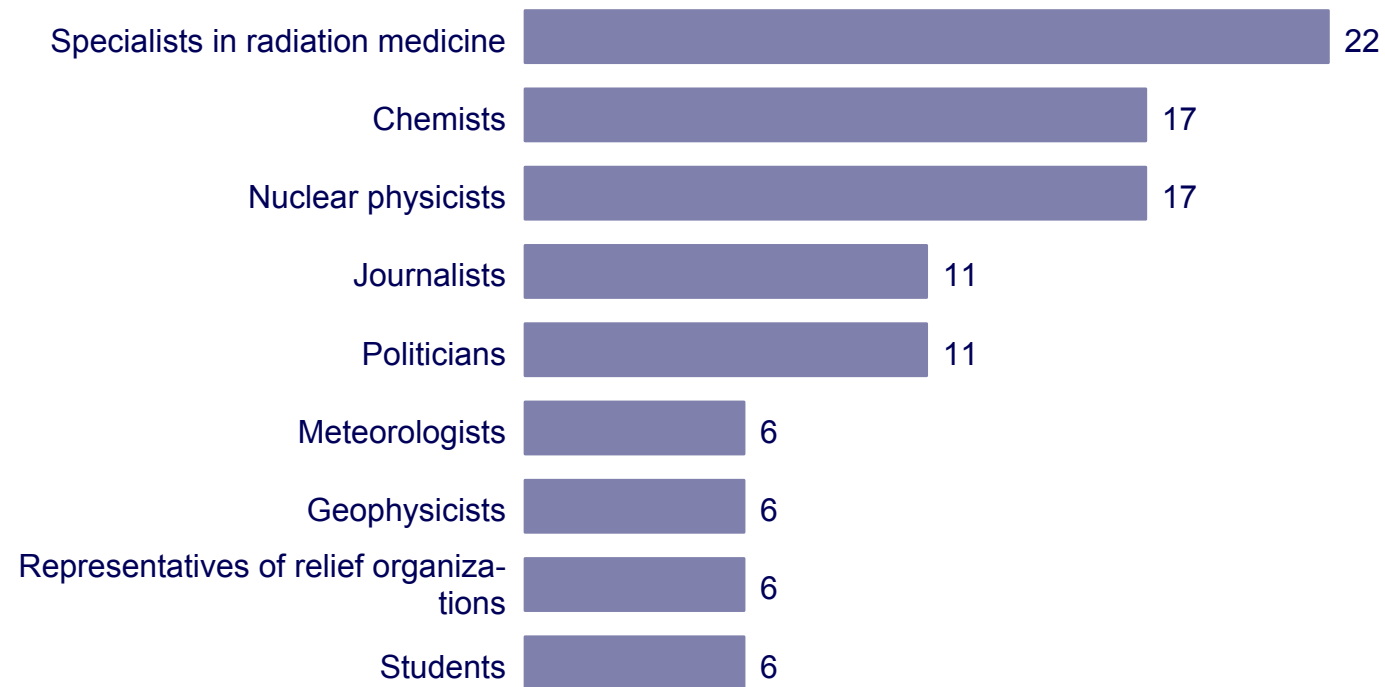
The Media Tenor and Public Opinion on Nuclear Energy



Source: Media Tenor; Allensbach Archives, IfD Surveys

After Fukushima: Which Experts Are Getting a Chance to Speak? – I

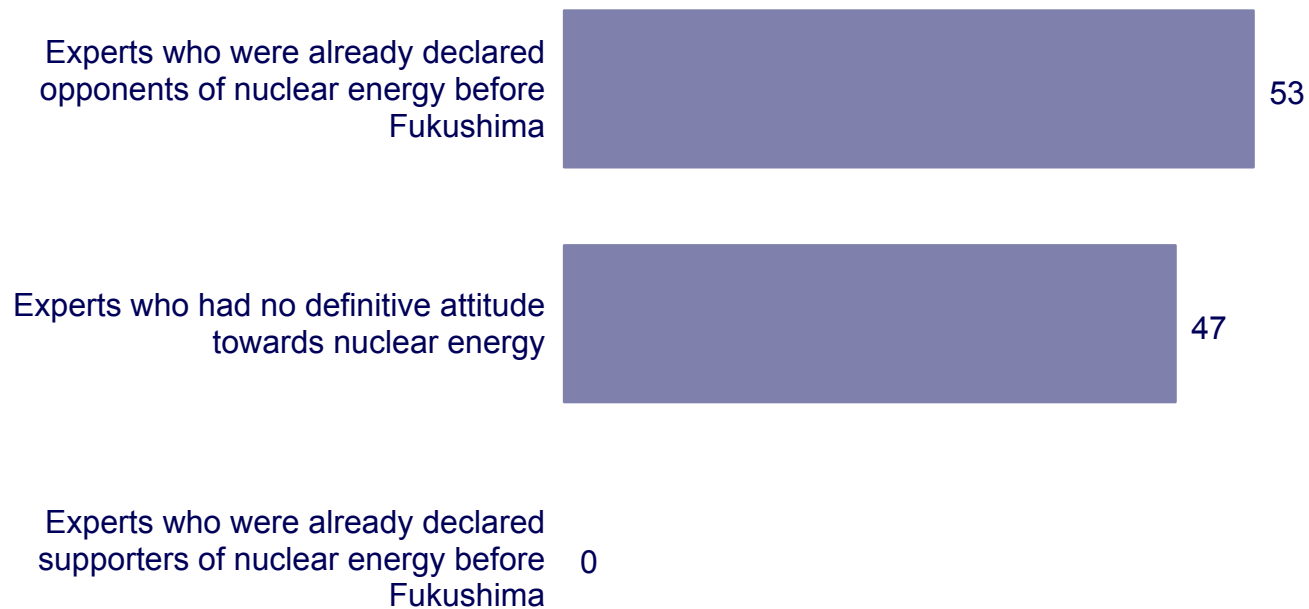
Fields of experts who were interviewed on the topic of Japan on the ARD, ZDF and RTL news programs in the time from March 1 – 20, 2011



Source: Media Tenor

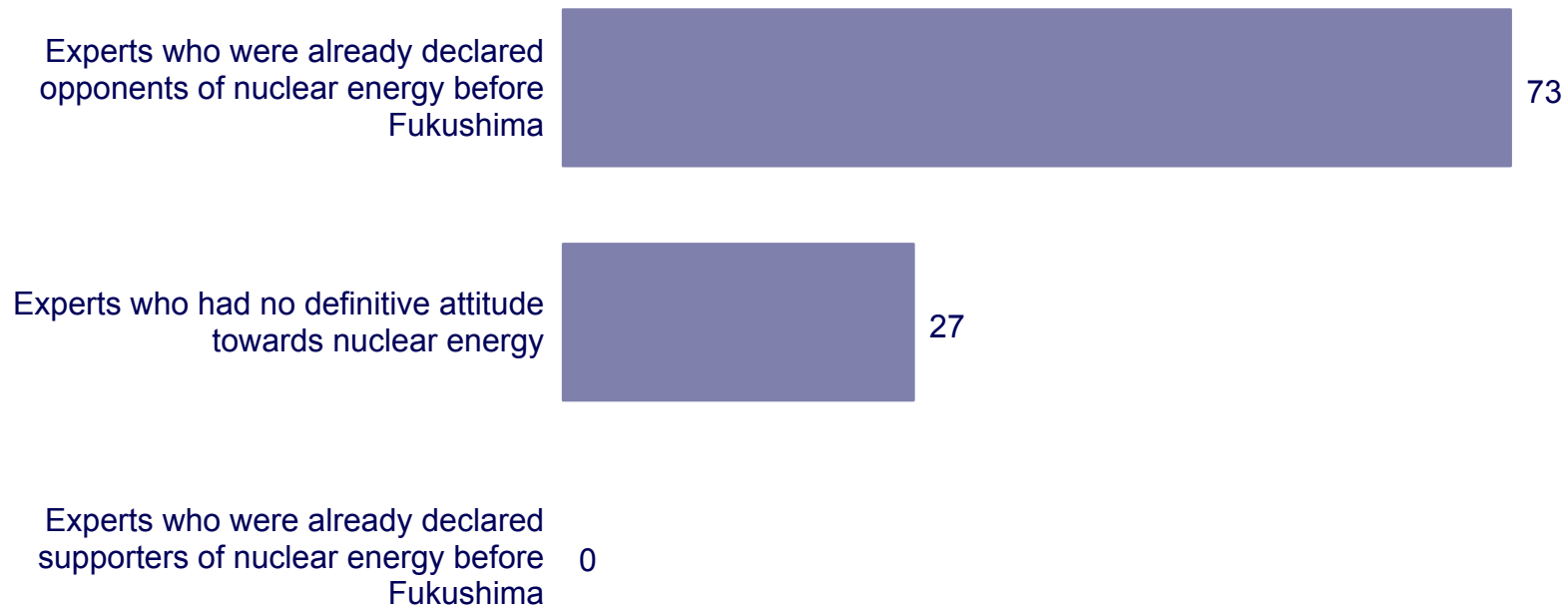
After Fukushima: Which Experts Are Getting a Chance to Speak? – II

Position taken in the debate on nuclear energy by experts who were interviewed on the topic of Japan on the ARD, ZDF and RTL news programs in the time from March 1 – 20, 2011



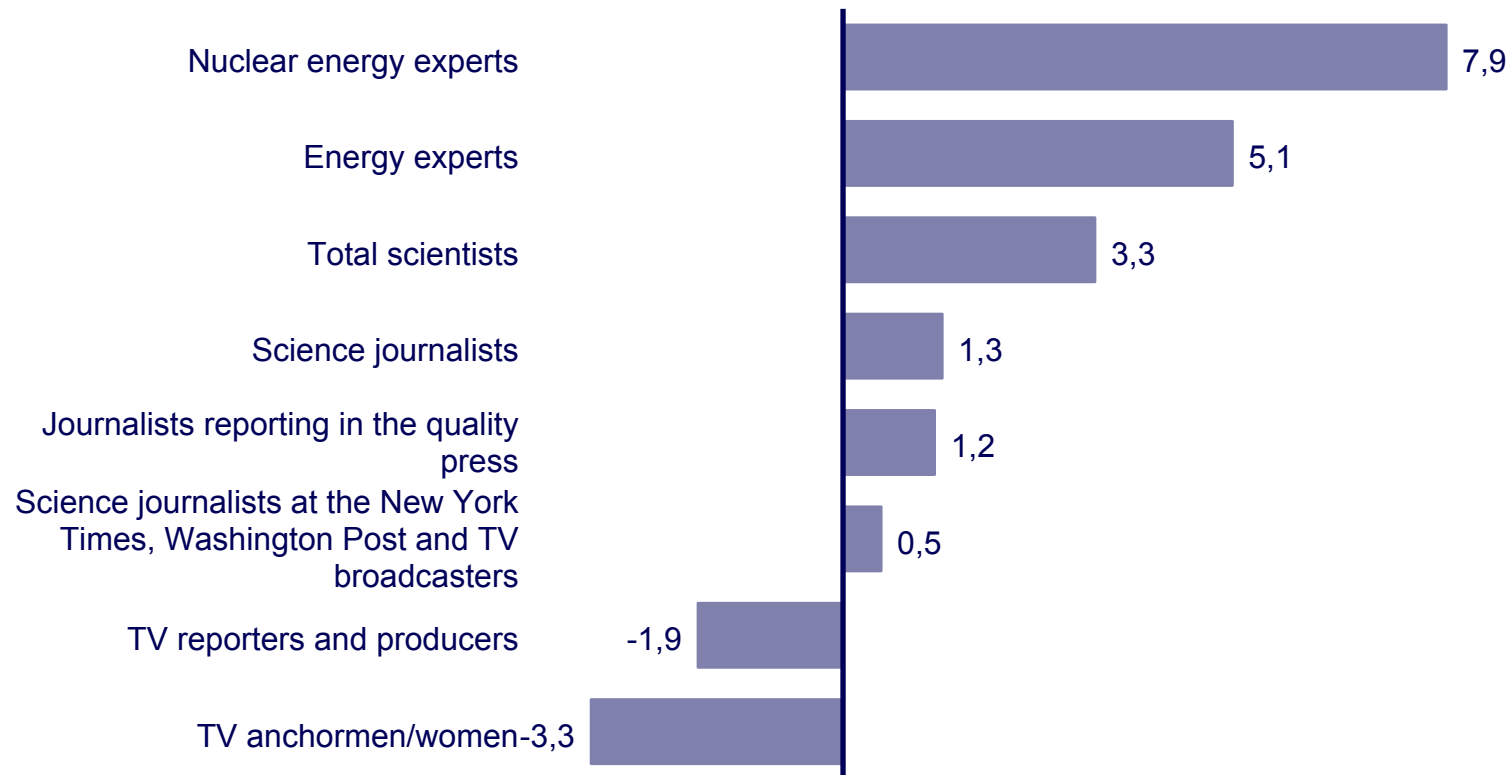
After Fukushima: Which Experts Are Getting a Chance to Speak? – III

Position taken in the debate on nuclear energy by natural scientists who were interviewed on the topic of Japan on the ARD, ZDF and RTL news programs in the time from March 1 – 20, 2011



USA 1982: Journalists and Scientists on Nuclear Energy

Degree of support for nuclear energy on a scale from -9 to +9



Source: Stanley Rothman, S. Robert Lichter: "The Nuclear Debate. Scientists, Media and the Public." In: *Public Opinion* Aug./Sept. 1982, pp. 47-52. Here p. 51.

Thank you!

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