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Reflections on two Contingent Valuation (CV) Studies on the Impact of Reducing Air Pollution.

NEEDS Study (2006) funded by EU

DEFRA funded Study (2004)

Joint work:

Susan Chilton, Michael Jones-Lee, Ari Rabl, Hugh Metcalf

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People are asked to trade off

Wealth for change in probability of Death

Value of Life Year (VOLY) can be calculated

Indication of Benefit for Cost-Benefit Analysis

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In context of Air Pollution there are 2 effects:

Acute – bad air day pollution

Chronic – ongoing levels

– faster ageing

Focus on Chronic

But CRUCIALLY important to explain the implications to each person

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In both studies respondents told:

“FASTER AGEING”

Some chemicals in the air may cause wear and tear on our bodies, so that people living in areas with more pollution may age faster and die younger than people in low pollution areas.

Some experts think that the average person in Britain may lose about a month of life in this way. Others think the average loss might be as much as a year.

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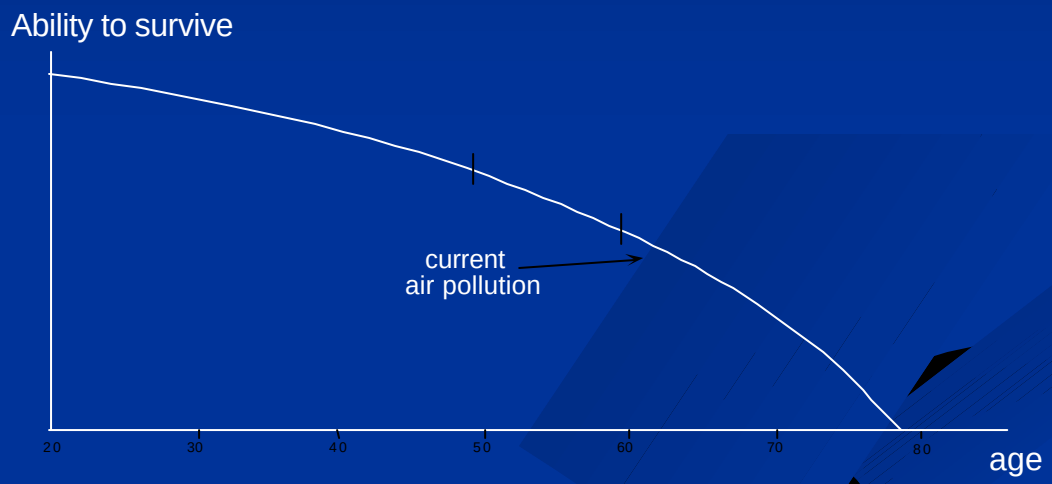
NEEDS augmented this with:



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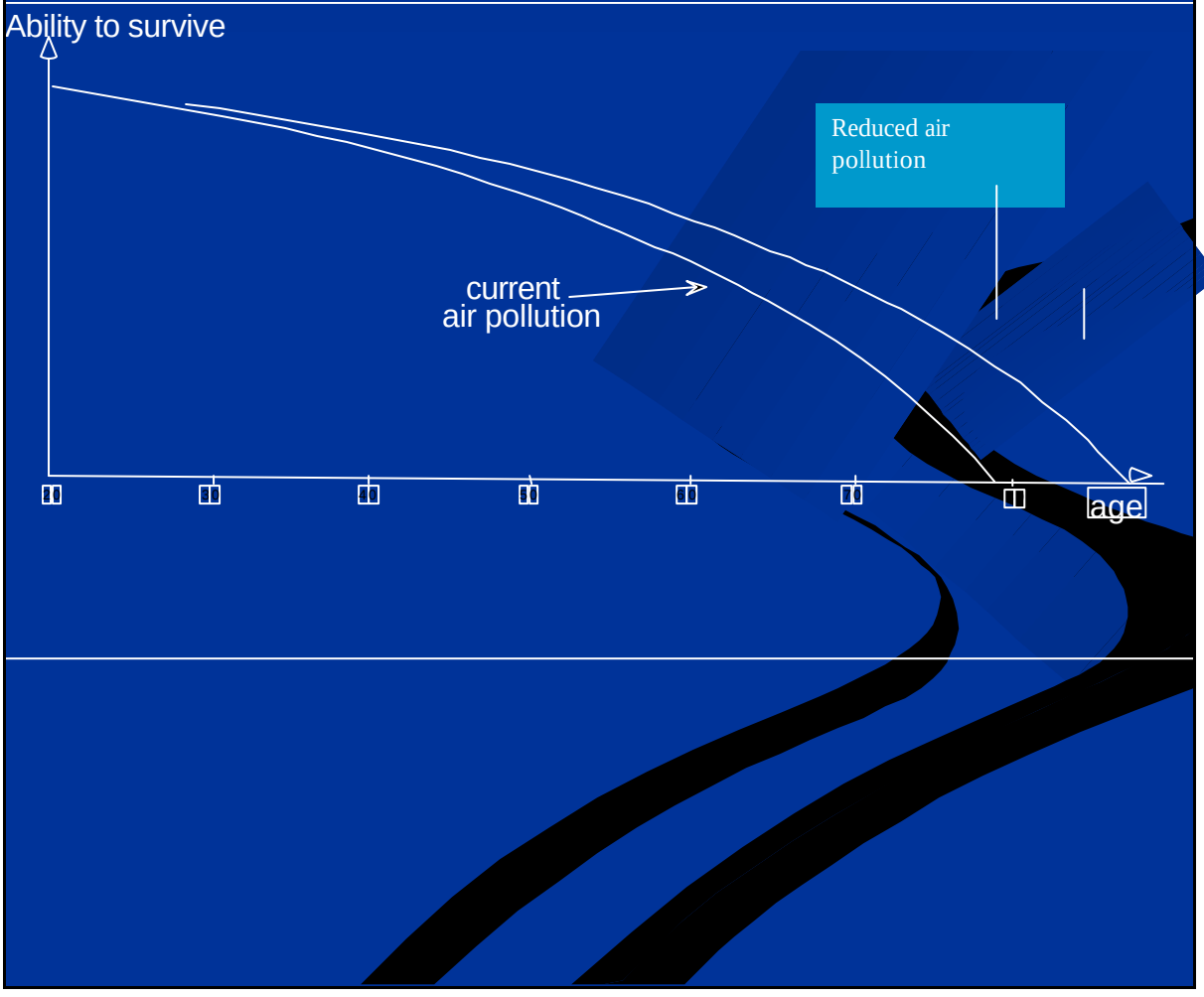
And this



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And also personalised it:

YOU VS. THE AVERAGE PERSON

What do we mean by the average person in terms of their health?

Does the profile of the average person change with their age?

How do you rate yourself in relation to the average person of your age?

Do you think that this will change as you grow older?

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DIFFERENT POLICIES & OUTCOMES

POLICY A (air pollution reduced by X%)
increase in life expectancy for the average person of **1 MONTH**
POLICY B (air pollution reduced by X%)
increase in life expectancy for the average person of **3 MONTHS**
POLICY C (air pollution reduced by X%)
increase in life expectancy for the average person of **6 MONTHS**
****

Note: outcomes expressed in terms of the **AVERAGE PERSON**. If you consider your health to be

LOWER THAN AVERAGE: there is a higher chance your gain will be a bit more than that of the average person- you are more vulnerable to the effects of air pollution and so may get a greater benefit from any reduction. But bear in mind there is a chance you could get less.

BETTER THAN AVERAGE HEALTH: there is a higher chance your gain will be a bit less than that of the average person- you are less vulnerable to the effects of air pollution and so may get a lower benefit from any reduction . But bear in mind there is a chance you could get more.

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WTP for gain in life expectancy

	1 month	3 months	6 months
Nos.	152	152	152
Zeros	109	78	52
Protests	43	38	22
Mean WTP	6.62	8.86	14.45
Omit Protest	9.22	11.81	16.90
Omit Outliers	2.88	5.91	12.00

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Regression Results

Log –Log Specification

Number =	331
F(3, 327) =	64.89
Prob > F =	0.0000
R-squared =	0.2765

WTP	Coef.	Std. Err.	t	P>|t|
PERIOD	0.374	0.090	4.14	0.000
BENEFIT	1.014	0.132	7.67	0.000
INCOME	0.228	0.075	3.03	0.003
CONSTANT	-1.771	0.517	-3.42	0.001

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Comparison of Estimates

	NEEDS (£)	DEFRA (£)
WTP 1 Month	15.12	12.11
WTP 3 Month	28.92	15.15
WTP 6 Month	41.04	17.43

NEEDS Study has 25% higher estimates

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Key other Differences

NEEDS	DEFRA
Uncertainty	More Certainty
Individual	Equal Share of Family
Focus Group	Individual Questionnaire

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Summary

Needs Study

More discussion of Life Expectancy

Introduced More Uncertainty

Focused on the Individual

Smaller Sample from only one region

25% Higher Estimates