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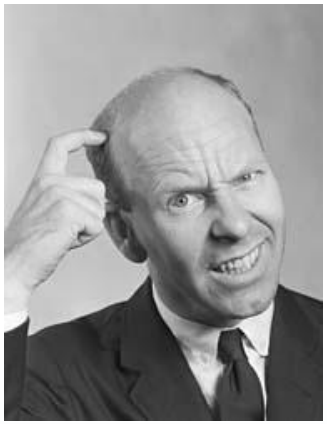

Ignorance is bliss? Individual knowledge and implications for pension policy and products

Gemma Tetlow

Pensions Research Network, University of Westminster

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Overview

- Retirement planning requires individuals to make a series of complex decisions with potentially imperfect information
  - Genuine uncertainty about future events
  - Costs of obtaining information
- What information individuals have is of significant policy interest
  - Policies that seek to influence individual behaviour by manipulating incentives rely on individuals understanding these
  - Shift from defined benefit to defined contribution pensions changes nature of information required of individuals
- Evidence on individuals' knowledge of...
  1. Public policies
  2. Chances of survival

Motivation

- Many public policy initiatives to change the incentives that individuals face (to retire, to save for retirement etc.)
  - Increasing State Pension Ages
  - Changing the structure of state pension system
- Much academic economics literature that attempts to understand behaviour and estimate responsiveness to incentives assumes that individuals are well-informed
  - Blundell, Meghir & Smith (2002); Attanasio & Rohwedder (2003)
  - A few (non-UK) exceptions: Bottazzi, Jappelli & Padula (2006); Chan & Stevens (2008)
- How people actually behave will depend on their actual knowledge
  - Accuracy
  - Certainty
- Existing work looking at (UK) pension knowledge: Bunt, Leo & Barlow (2006); Clery *et al* (2007)

Data

- English Longitudinal Study of Ageing (ELSA)
  - Biennial panel survey of a representative sample of English households aged 50+
  - Multidisciplinary, including
    - Demographics – household composition, education, social class, occupation
    - Income – earnings, assets income, self-employment/business income, benefits etc.
    - Wealth – financial, housing, physical, private pensions, secured and unsecured debt
    - Housing – nature of and satisfaction with housing
    - Health – objective and subjective measures of mental and physical health (including nurse visit and blood samples)
    - Cognitive functioning – numeracy and literacy
    - Social participation
    - Expectations of the future
  - Five waves of data: 2002/03 to 2010/11

Knowledge of the state pension system

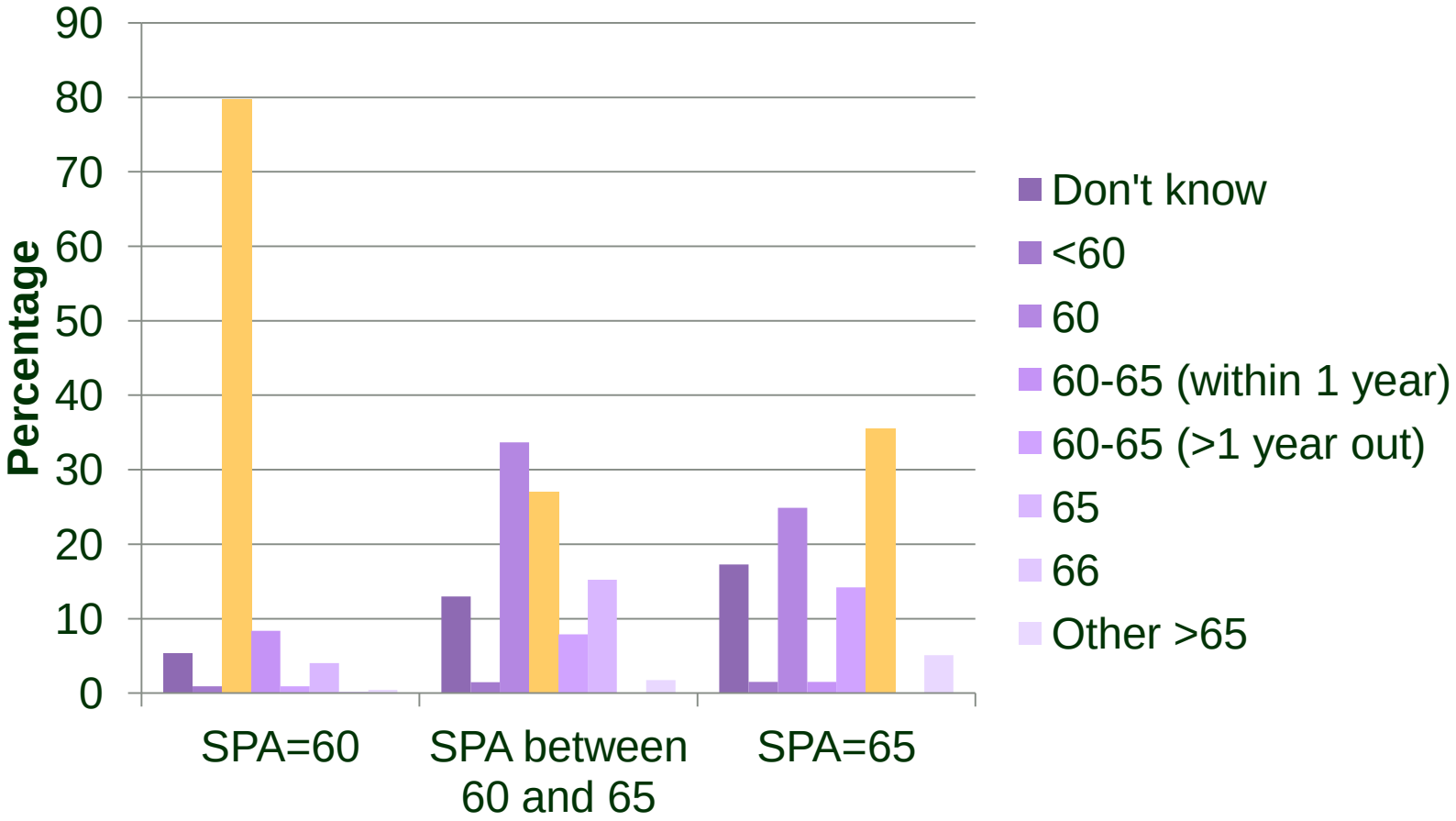
- Most individuals entitled to some state pension income
- Paid from State Pension Age
- Basic State Pension worth approximately 15% of average earnings
  - Low replacement rate for mid-/high-earners
  - But significant earnings replacement for some
- How much do people know?
  1. When they will start to receive their pension? (Women)
  2. How much they will get?

State Pension Age: knowledge among women

- State Pension Age has been increased
  - Increase from 60 to 65 for women: legislated in 1995
    - Affects women born after March 1950
    - Objective: remove gender-inequalities to comply with European legislation
  - Increase from 65 to 66 for men and women: legislated in 2007
    - Affects those born after March 1959
    - Objective: ease pressure on public finances
  - Increase to 66 brought forward: legislated in November 2011
    - Affects women born between April 1953 and March 1960
    - Affects men born between December 1953 and March 1960
    - Objective: ease pressure on public finances

Knowledge of SPA reforms already legislated is (surprisingly?) poor...

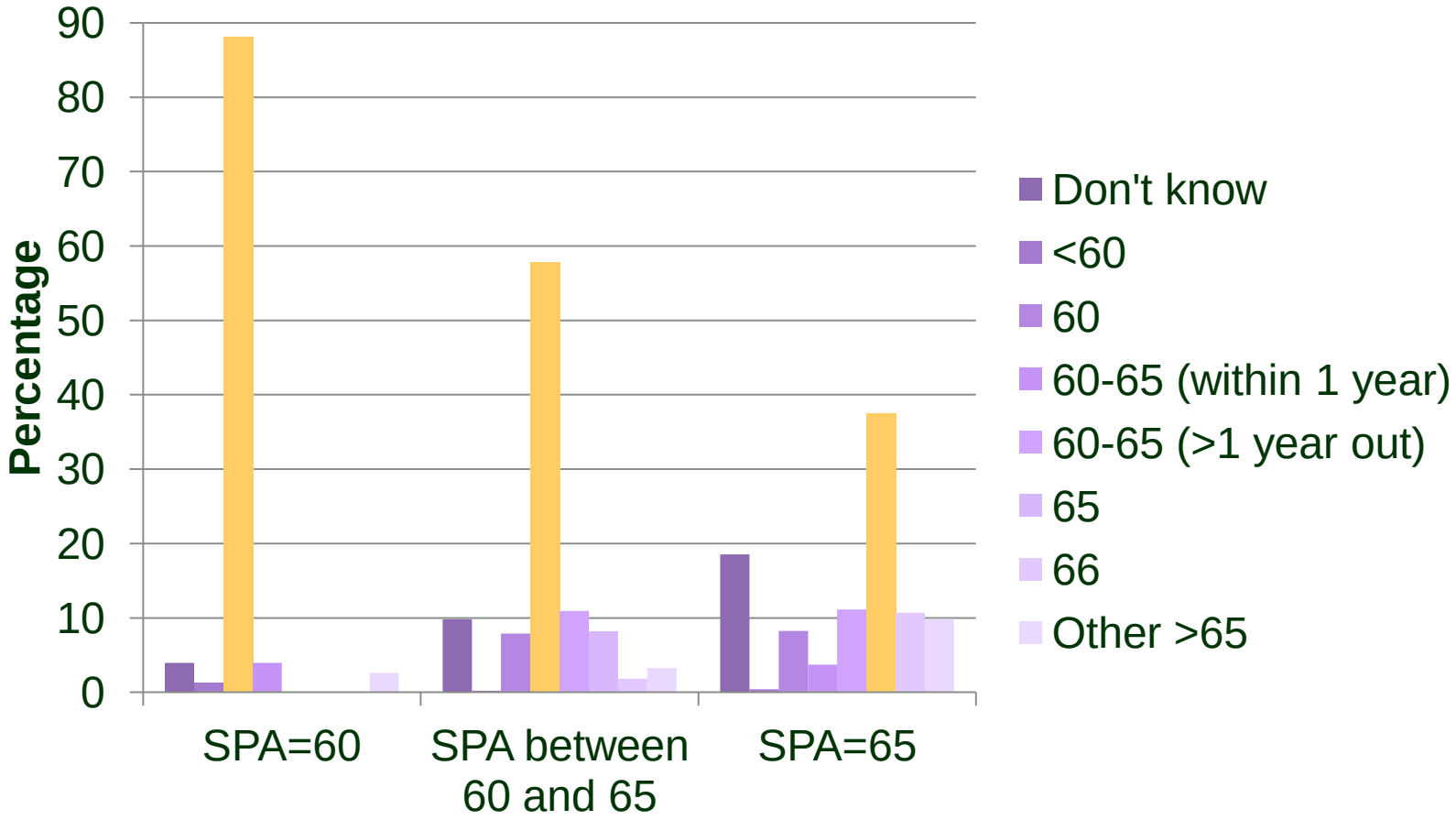
Self-reported State Pension Age: women, by actual SPA (2006/07)



Notes: Orange bars show the "correct" answer. Responses are coded as "correct" for people with an SPA between 60 and 65, if an answer within one year of the true answer was given.
Source: English Longitudinal Study of Ageing (2006–07).

...knowledge seems to improve over time (1)...

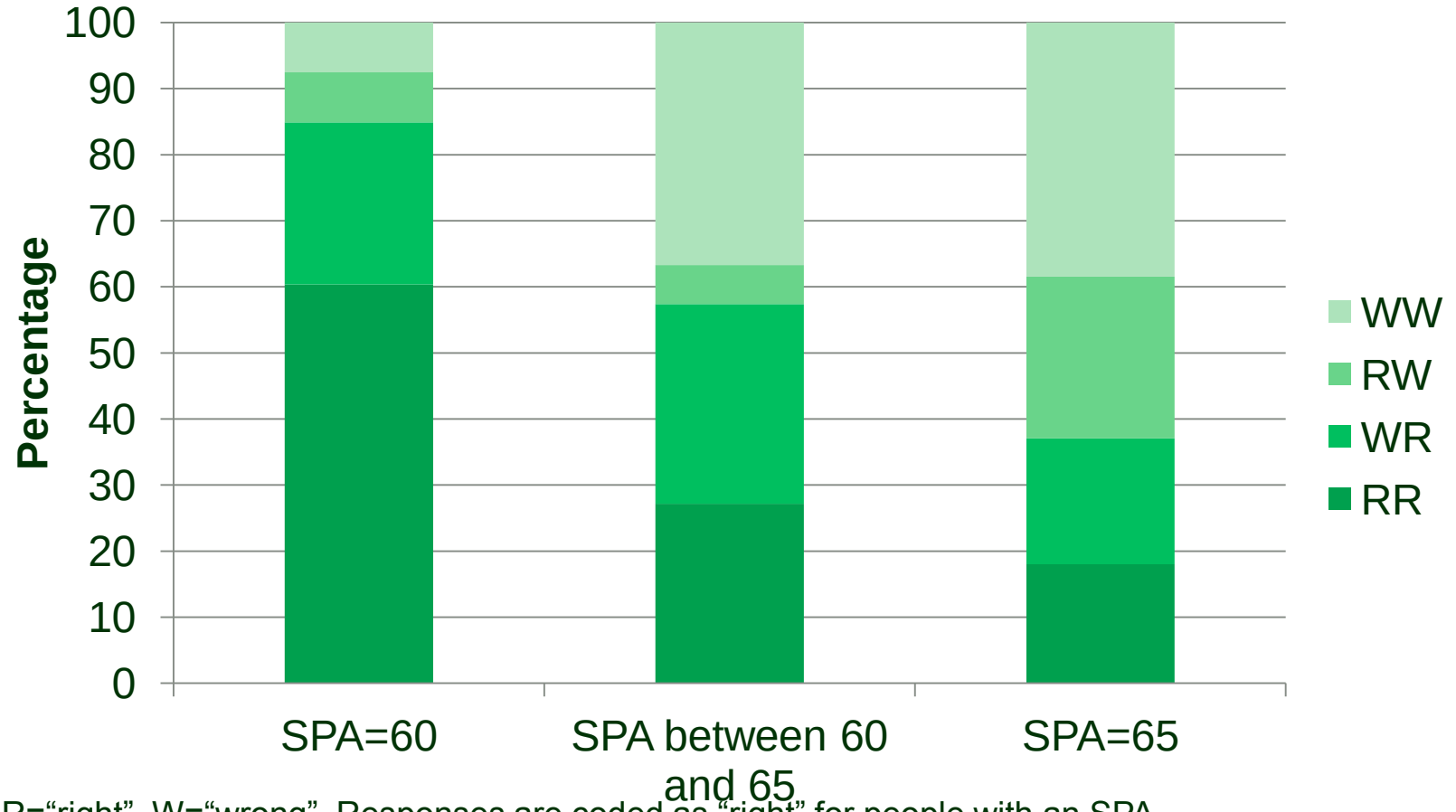
Self-reported State Pension Age: women, by actual SPA as legislated in Pensions Act 2007 (2010/11)



Notes: Orange bars show the "correct" answer. Responses are coded as "correct" for people with an SPA between 60 and 65, if an answer within one year of the true answer was given.
Source: English Longitudinal Study of Ageing (2010–11).

...knowledge seems to improve over time (2)...

Changes in self-reported State Pension Age: women, by actual SPA as legislated in Pensions Act 2007 (2006/07 to 2010/11)



Note: R="right", W="wrong". Responses are coded as "right" for people with an SPA between 60 and 65, if an answer within one year of the true answer was given.
Source: English Longitudinal Study of Ageing (2006–07 and 2010–11, balanced panel).

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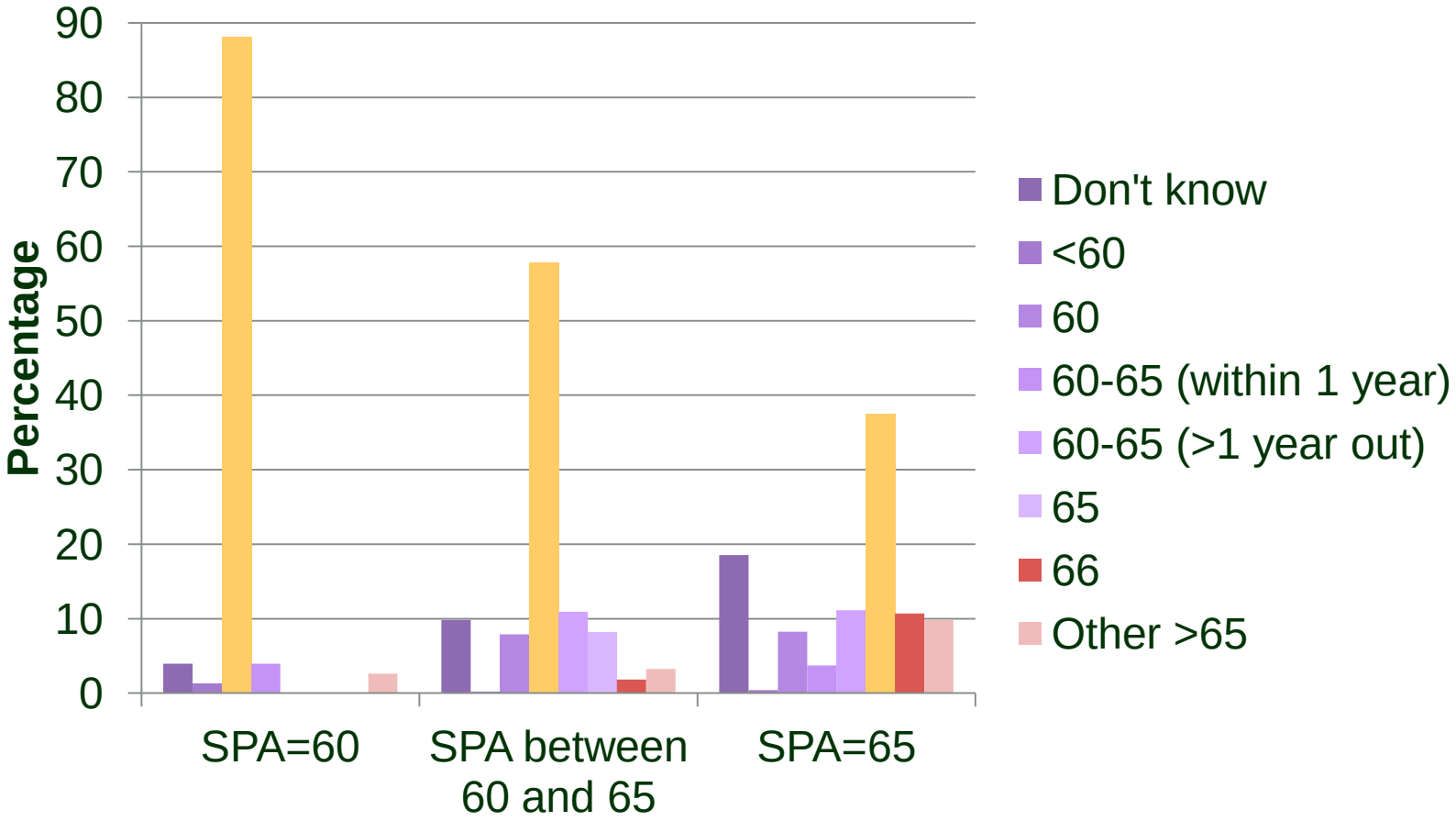
...and perhaps people anticipated forthcoming legislation?

Self-reported State Pension Age: women, by actual SPA as legislated in Pensions Act 2011 (2010/11)



Notes: Orange bars show the "correct" answer. Responses are coded as "correct" for people with an SPA between 60 and 65, if an answer within one year of the true answer was given.
Source: English Longitudinal Study of Ageing (2010–11).

Changes in State Pension Age brought about by Pensions Act 2011

% (columns sum to 100%)		Pension age prior to Pensions Act 2011		
		60	*Between 60 and 65*	*65*
Pension age in Pensions Act 2011	*60*	100.0	0.0	0.0
	Between 60 and 65	0.0	74.1	0.4
	65	0.0	0.5	0.0
	Between 65 and 66	0.0	14.5	0.0
	66	0.0	10.9	99.6
Sample size		*76*	*926*	*244*

Source: Women aged under State Pension Age who responded to English Longitudinal Study of Ageing (2010–11).

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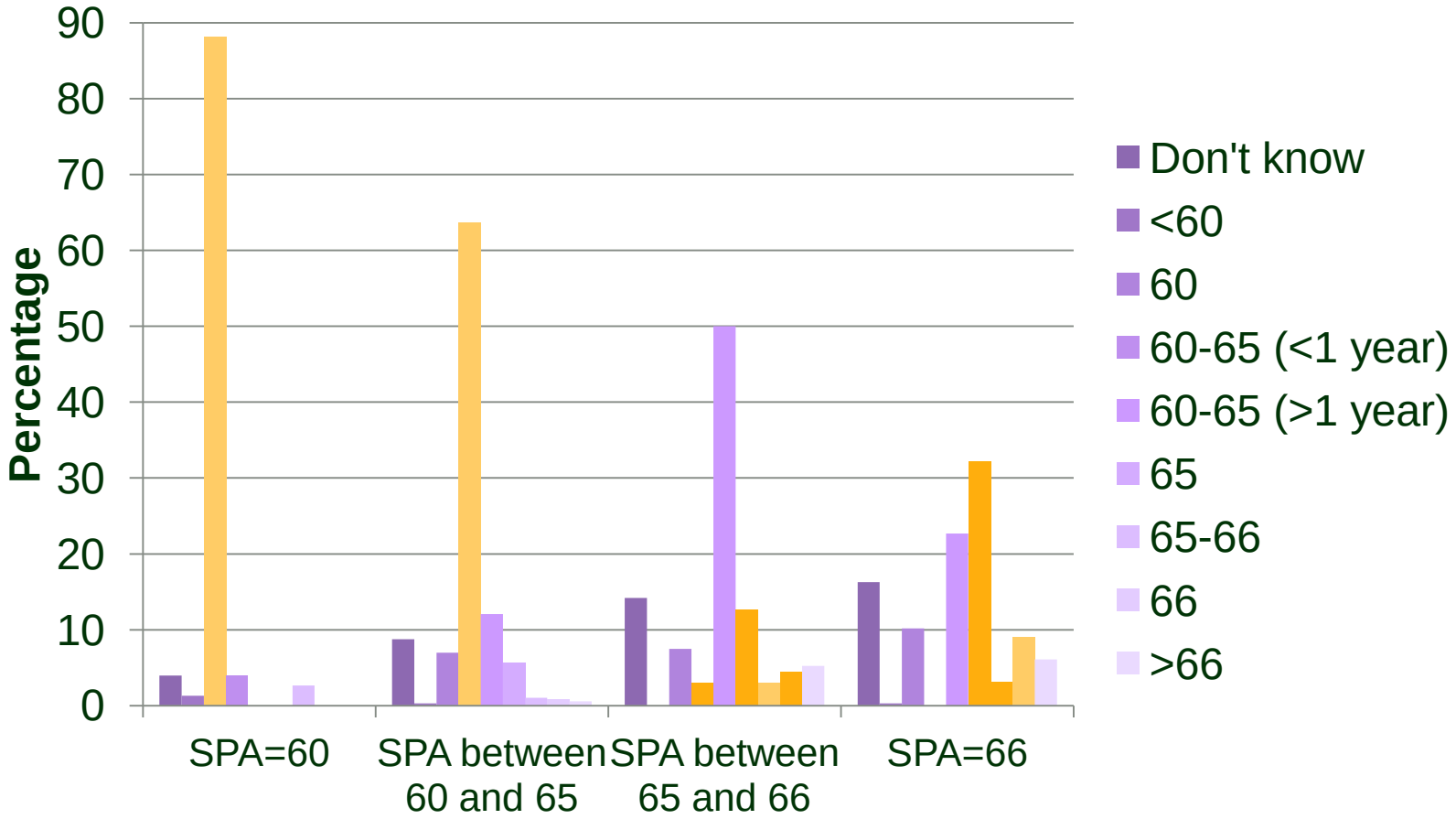
...or maybe it just confused them?

Self-reported State Pension Age: women, by actual SPA as legislated in Pensions Act 2011 (2010/11)



Notes: Orange bars show the "correct" answer. Responses are coded as "correct" for people with an SPA above 60, if an answer within one year of the true answer was given.

Source: English Longitudinal Study of Ageing (2010–11).

Uncertainty about future state pension income

- Questions fielded in ELSA (2006/07, 2008/09 and 2010/11) to capture expectations of future state pension income
  - "If you added together your expected income from state pensions, including those from SERPS/State Second Pension, what is the **most** income you could expect to receive at state pension age in the **best** case scenario?"
  - "...**least** income...in the **worst** case scenario?"
  - For up to 3 points between min and max: "What are the chances you will receive more than...?"

Expectations of state pension: response patterns

Men	2006/07	2008/09	2010/11
No max or min ("Complete uncertainty")			
At least one probability			
No probabilities			
Max>min+£10			
Max<=min+£10 ("Complete certainty")			

Women	2006/07	2008/09	2010/11

Source: English Longitudinal Study of Ageing (waves 3–5).

Expectations of state pension: response patterns

Men	2006/07	2008/09	2010/11
No max or min ("Complete uncertainty")			
At least one probability	21.4		
No probabilities	12.1		
Max>min+£10	32.7		
Max<=min+£10 ("Complete certainty")	29.2		

Women	2006/07	2008/09	2010/11

Source: English Longitudinal Study of Ageing (waves 3–5).

Expectations of state pension: response patterns

Men	2006/07	2008/09	2010/11
No max or min ("Complete uncertainty")			
At least one probability	21.4	21.6	17.4
No probabilities	12.1	12.8	11.8
Max>min+£10	32.7	33.4	35.9
Max<=min+£10 ("Complete certainty")	29.2	26.4	30.2

Women	2006/07	2008/09	2010/11

Source: English Longitudinal Study of Ageing (waves 3–5).

Expectations of state pension: response patterns

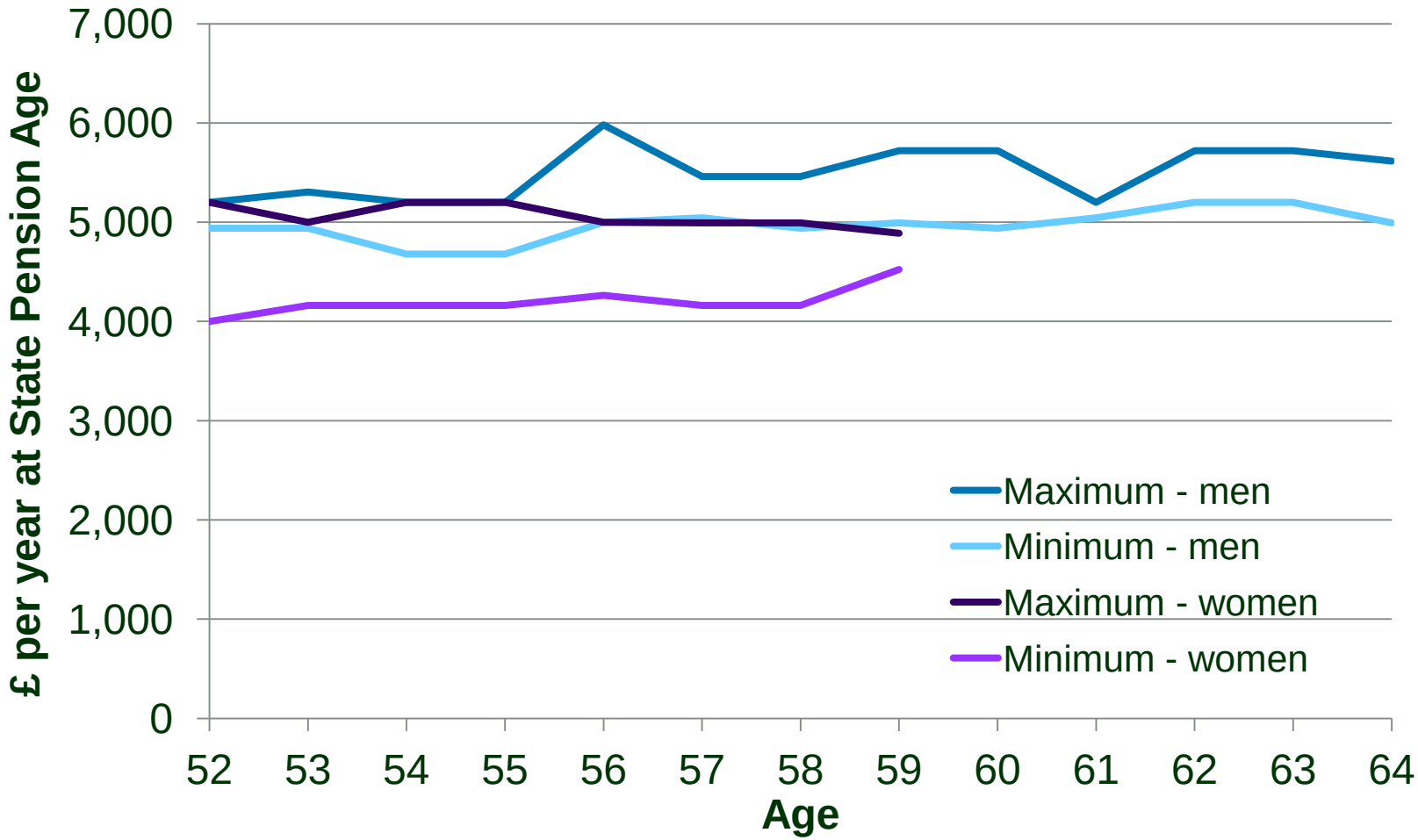
Men	2006/07	2008/09	2010/11
No max or min ("Complete uncertainty")			
At least one probability	21.4	21.6	17.4
No probabilities	12.1	12.8	11.8
Max>min+£10	32.7	33.4	35.9
Max<=min+£10 ("Complete certainty")	29.2	26.4	30.2

Women	2006/07	2008/09	2010/11
No max or min ("Complete uncertainty")			
At least one probability	19.3	23.5	23.2
No probabilities	15.1	15.2	12.8
Max>min+£10	26.1	29.0	30.8
Max<=min+£10 ("Complete certainty")	33.7	26.2	28.2

Source: English Longitudinal Study of Ageing (waves 3–5).

How much state pension do people expect?

Median reported minimum and maximum income, by sex (2008/09)



Source: English Longitudinal Study of Ageing (2008/09).

Which characteristics are associated with greater certainty?

Ordered logit regression (complete uncertainty=1; complete certainty=3)

	Men		Women	
	Coeff.	S.E.	Coeff.	S.E.
2008/09				
2010/11				
Married				
Owner-occupier				
Mid education				
High education				
Private pension				
Retired				
Not work, not retired				
Cut point 1				
Cut point 2				

Notes: Base category is individuals aged 50, interviewed in 2006/07, not married, live in rented property, have low education, working, do not self-define as retired, not member of private pension. Coefficients in bold are significant at the 5% level.

Source: English Longitudinal Study of Ageing (waves 3–5).

Which characteristics are associated with greater certainty?

Ordered logit regression (complete uncertainty=1; complete certainty=3)

	Men		Women	
	Coeff.	S.E.	Coeff.	S.E.
2008/09	-0.009	0.056		
2010/11	**0.164**	0.062		
Married	0.079	0.071		
Owner-occupier	**0.336**	0.094		
Mid education	**0.167**	0.071		
High education	**0.350**	0.072		
Private pension	**0.261**	0.097		
Retired	**0.489**	0.074		
Not work, not retired	-0.066	0.091		
Cut point 1	0.248			
Cut point 2	2.105			

Notes: Base category is individuals aged 50, interviewed in 2006/07, not married, live in rented property, have low education, working, do not self-define as retired, not member of private pension. Coefficients in bold are significant at the 5% level.

Source: English Longitudinal Study of Ageing (waves 3–5).

Which characteristics are associated with greater certainty?

Ordered logit regression (complete uncertainty=1; complete certainty=3)

	Men		Women	
	Coeff.	S.E.	Coeff.	S.E.
2008/09	-0.009	0.056	-0.034	0.065
2010/11	**0.164**	0.062	-0.050	0.077
Married	0.079	0.071	**-0.189**	0.073
Owner-occupier	**0.336**	0.094	**0.319**	0.037
Mid education	**0.167**	0.071	0.073	**0.080**
High education	**0.350**	0.072	**0.183**	0.092
Private pension	**0.261**	0.097	**0.175**	0.079
Retired	**0.489**	0.074	**0.398**	0.125
Not work, not retired	-0.066	0.091	**-0.236**	0.087
Cut point 1	0.248		0.001	
Cut point 2	2.105		1.698	

Notes: Base category is individuals aged 50, interviewed in 2006/07, not married, live in rented property, have low education, working, do not self-define as retired, not member of private pension. Coefficients in bold are significant at the 5% level.

Source: English Longitudinal Study of Ageing (waves 3–5).

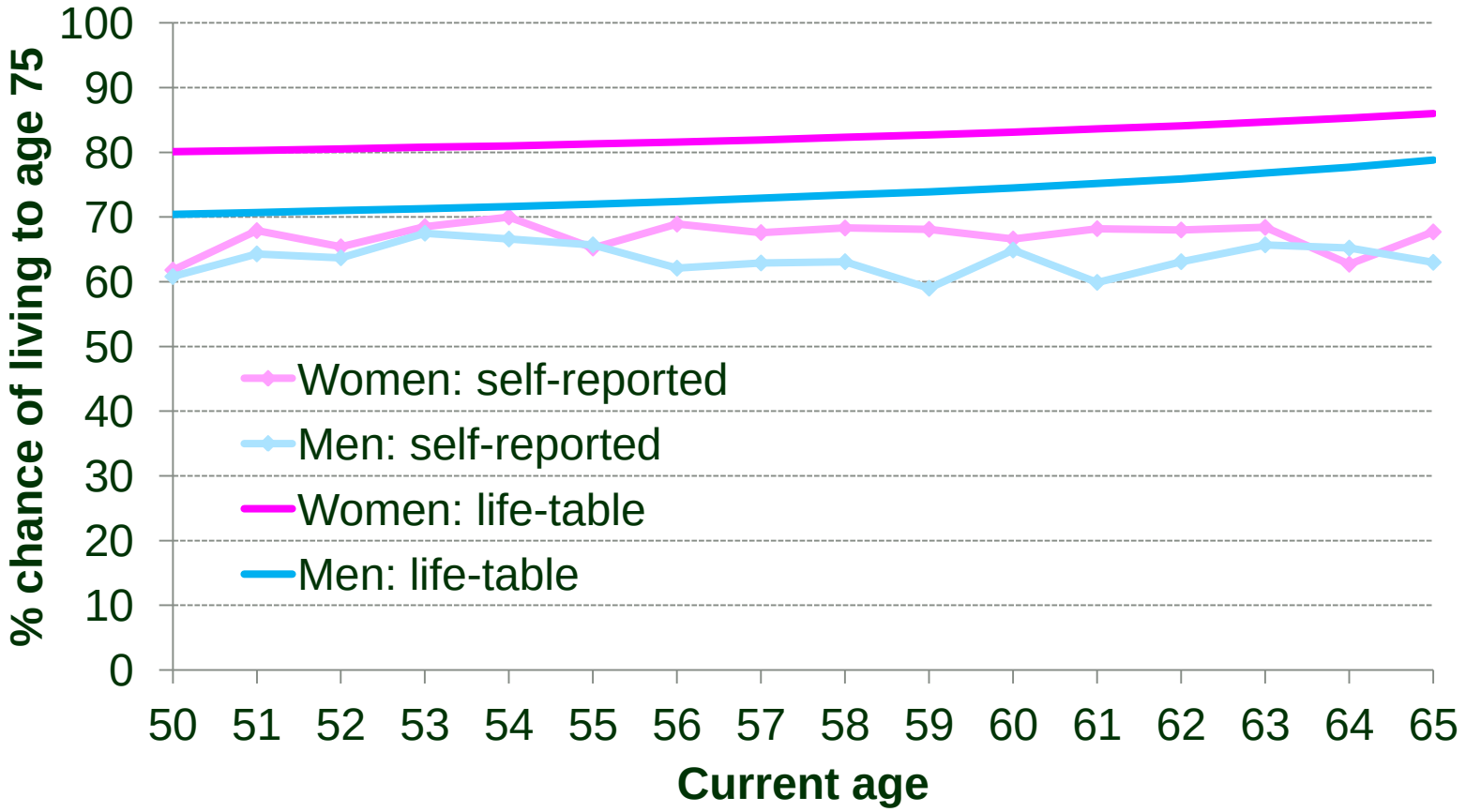
Knowledge of public policy: summary

- Knowledge of state pension age changes legislated in 1995 is (surprisingly?) low
  - Knowledge is improving over time (as women approach SPA)
  - But significant numbers still do not understand
  - Individuals seem to have been aware of more recent debates on further increases (but do not necessarily understand how they personally will be affected?)
- Knowledge of state pension income entitlements
  - Roughly equal split between people with no idea, some idea, completely certain
  - Men more likely to be certain than women, as are owner-occupiers, higher-educated, those with private pensions
  - Expected income levels in line with a full Basic State Pension

Planning for the future: expected chances of survival

- Saving for retirement, decisions about when and how to consume accumulated wealth depend on how long people expect to live for
- Attractiveness of certain financial products (e.g. annuities, life insurance) will depend on individuals' expectations compare to the assumptions used in pricing these products
- How do individuals' own survival expectations compare to "the truth"?

The English are pessimistic about their chances of survival to age 75...



Source: Author's calculations using English Longitudinal Study of Ageing (2006–07) and Government Actuary's Department 2005–07 based interim life tables.

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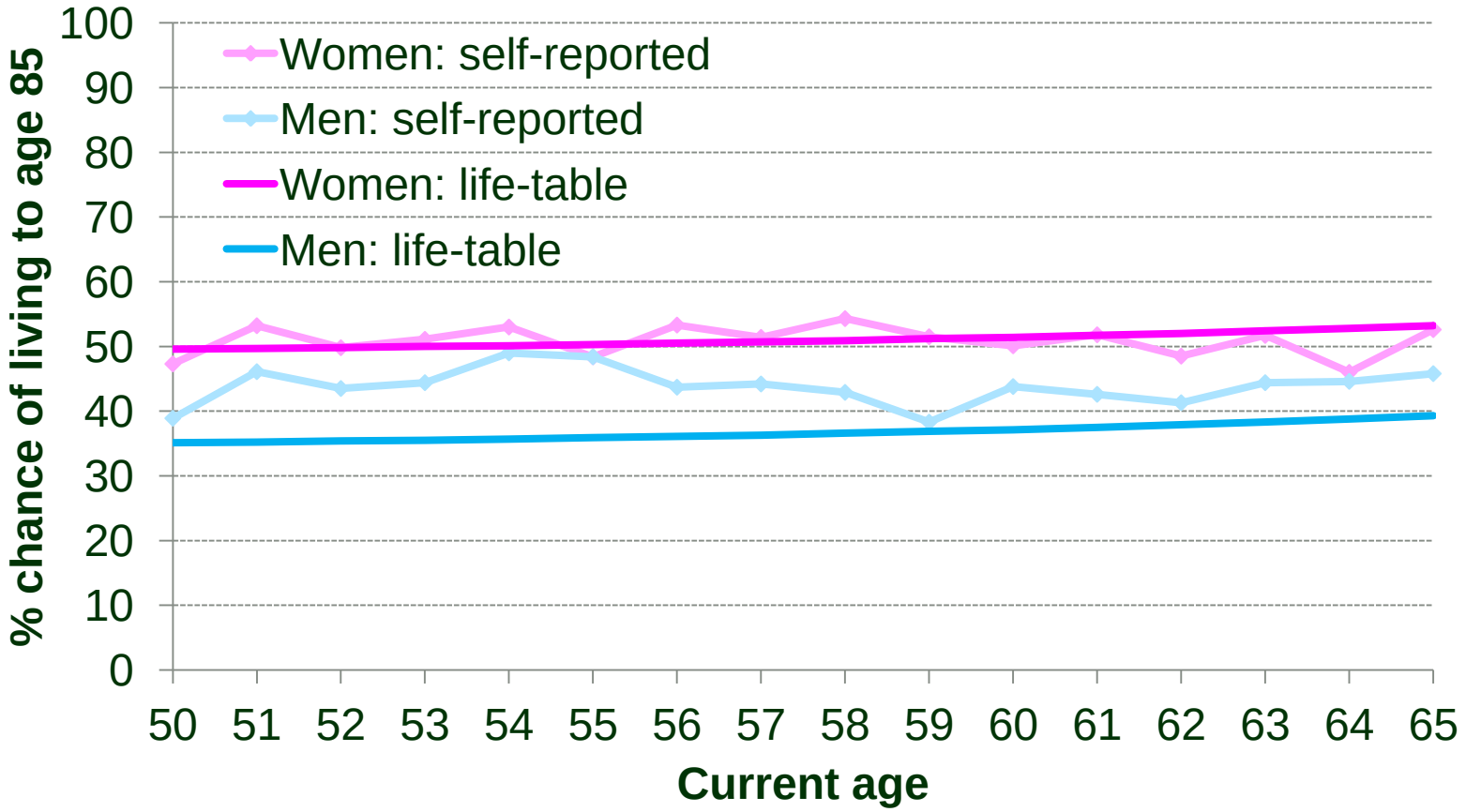
But not about their chances of survival to age 85...



Source: Author's calculations using English Longitudinal Study of Ageing (2006–07) and Government Actuary's Department 2005–07 based interim life tables.

In contrast, the Americans are more optimistic...

Note: Health and Retirement Study. Individuals aged 51–61.
Source: Table 1 of Hurd and McGarry (2002).

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Although survival expectations are correlated with known risk factors...

	Men		Women	
	Coeff.	*S.E.*	Coeff.	*S.E.*
Age-50				
Income quintile: 4th				
3rd				
2nd				
Lowest				
Current smoker				
Diagnosed with: heart disease				
stroke				
lung disease				
cancer				
Intercept				

Notes: ELSA (2002/03) data. OLS regression of reported chance of surviving to age 75. Coefficients in bold indicate significance at the 5% level. Also control for education level, numeracy, wealth, alcohol consumption.

Although survival expectations are correlated with known risk factors...

	Men		Women	
	Coeff.	*S.E.*	Coeff.	*S.E.*
Age-50	**0.316**	*0.115*		
Income quintile: 4th	**-1.292**	*-1.222*		
3rd	**-5.450**	*1.411*		
2nd	**-4.019**	*1.655*		
Lowest	**-4.470**	*1.590*		
Current smoker	**-7.792**	*1.326*		
Diagnosed with: heart disease	**-9.089**	*1.536*		
stroke	**-7.491**	*3.054*		
lung disease	**-7.105**	*2.156*		
cancer	-4.789	*2.504*		
Intercept	**71.983**	*2.192*		

Notes: ELSA (2002/03) data. OLS regression of reported chance of surviving to age 75. Coefficients in bold indicate significance at the 5% level. Also control for education level, numeracy, wealth, alcohol consumption.

Although survival expectations are correlated with known risk factors...

	Men		Women	
	Coeff.	*S.E.*	Coeff.	*S.E.*
Age-50	**0.316**	*0.115*	**0.314**	*0.103*
Income quintile: 4th	**-1.292**	*-1.222*	**-3.200**	*1.169*
3rd	**-5.450**	*1.411*	-2.439	*1.309*
2nd	**-4.019**	*1.655*	-2.774	*1.447*
Lowest	**-4.470**	*1.590*	**-7.396**	*1.419*
Current smoker	**-7.792**	*1.326*	**-4.673**	*1.110*
Diagnosed with: heart disease	**-9.089**	*1.536*	**-5.604**	*1.967*
stroke	**-7.491**	*3.054*	-3.130	*3.386*
lung disease	**-7.105**	*2.156*	**-6.432**	*1.926*
cancer	-4.789	*2.504*	**-5.217**	*1.681*
Intercept	**71.983**	*2.192*	**78.152**	*2.161*

Notes: ELSA (2002/03) data. OLS regression of reported chance of surviving to age 75. Coefficients in bold indicate significance at the 5% level. Also control for education level, numeracy, wealth, alcohol consumption.

...and people seem to "learn" from their parents' experience

	Men		Women	
	Coeff.	*S.E.*	Coeff.	*S.E.*
Father: still alive				
Died aged <50				
Died aged 50-64				
Died aged 65-74				
Died aged 75-84				
Died aged 85+				
Mother: still alive				
Died aged <50				
Died aged 50-64				
Died aged 65-74				
Died aged 75-84				
Died aged 85+				

Notes: ELSA (2002/03) data. OLS regression of reported chance of surviving to age 75. Coefficients in bold indicate significance at the 5% level. Also control for education level, numeracy, wealth, alcohol consumption.

...and people seem to "learn" from their parents' experience

	Men		Women	
	Coeff.	*S.E.*	Coeff.	*S.E.*
Father: still alive	–	–		
Died aged <50	**-6.686**	*2.218*		
Died aged 50-64	**-10.354**	*1.678*		
Died aged 65-74	**-7.862**	*1.612*		
Died aged 75-84	-2.812	*1.624*		
Died aged 85+	0.021	*2.054*		
Mother: still alive	–	–		
Died aged <50	**-5.598**	*2.209*		
Died aged 50-64	**-5.711**	*1.550*		
Died aged 65-74	-2.315	*1.407*		
Died aged 75-84	-1.410	*1.292*		
Died aged 85+	1.138	*1.679*		

Notes: ELSA (2002/03) data. OLS regression of reported chance of surviving to age 75. Coefficients in bold indicate significance at the 5% level. Also control for education level, numeracy, wealth, alcohol consumption.

...and people seem to "learn" from their parents' experience

	Men		Women	
	Coeff.	*S.E.*	Coeff.	*S.E.*
Father: still alive	–	–	–	–
Died aged <50	**-6.686**	*2.218*	-3.336	*1.964*
Died aged 50-64	**-10.354**	*1.678*	**-5.750**	*1.454*
Died aged 65-74	**-7.862**	*1.612*	**-4.285**	*1.374*
Died aged 75-84	-2.812	*1.624*	-1.046	*1.388*
Died aged 85+	0.021	*2.054*	0.398	*1.878*
Mother: still alive	–	–	–	–
Died aged <50	**-5.598**	*2.209*	-3.879	*2.209*
Died aged 50-64	**-5.711**	*1.550*	**-8.662**	*1.419*
Died aged 65-74	-2.315	*1.407*	**-7.635**	*1.235*
Died aged 75-84	-1.410	*1.292*	**-3.016**	*1.142*
Died aged 85+	1.138	*1.679*	-0.676	*1.491*

Notes: ELSA (2002/03) data. OLS regression of reported chance of surviving to age 75. Coefficients in bold indicate significance at the 5% level. Also control for education level, numeracy, wealth, alcohol consumption.

Survival expectations: summary

- On average, under-estimate chances of survival to age 75
  - Particularly women
- On average, expectations of survival to age 85 are close to life table values
  - Implies under estimate chances of dying between 75 and 85
- But survival probabilities do seem to convey some useful information
  - Correlated with known risk factors

What are the implications of poor knowledge for policy and financial products?

- Underestimating State Pension Age
  - Instead of adjusting gradually over a period of time, short, sharp adjustment will now be required
  - Could result in significant numbers continuing in work or experiencing lower living standards
- Uncertainty about state pension income
  - Risk averse individuals will save more
- Inaccuracy about future state pension income
  - If over-estimate, could do “too little” private saving
  - If under-estimate, could do “too much” private saving
- Underestimating longevity
  - Under-save for old age, decumulate assets too quickly
  - Annuity products perceived to provide poor value-for-money

Next steps and potential further work

- Impact of changing women's State Pension Age
  - In other work: estimating impact using Labour Force Survey data
- How accurate are individuals' expectations of state pension income?
  - Match to administrative data
  - Distinguish certainty from accuracy
- How do expectations relate to behaviour?
  - Do individuals respond to their perceptions of policy rather than actual policy?
  - How does uncertainty about future state/private pension income and chances of survival affect... saving, portfolio choice?
- How does debate of further reforms affect knowledge?
  - What are the implications for effectively communicating policy changes?

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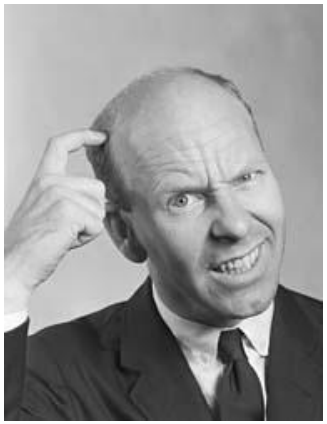

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