AGE AND LIFE SATISFACTION: GETTING CONTROL VARIABLES UNDER CONTROL

- Age/life satisfaction "U-shape"?

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- But: models must exclude individual-level controls
  - (Glenn 2009, Hellevik 2017)

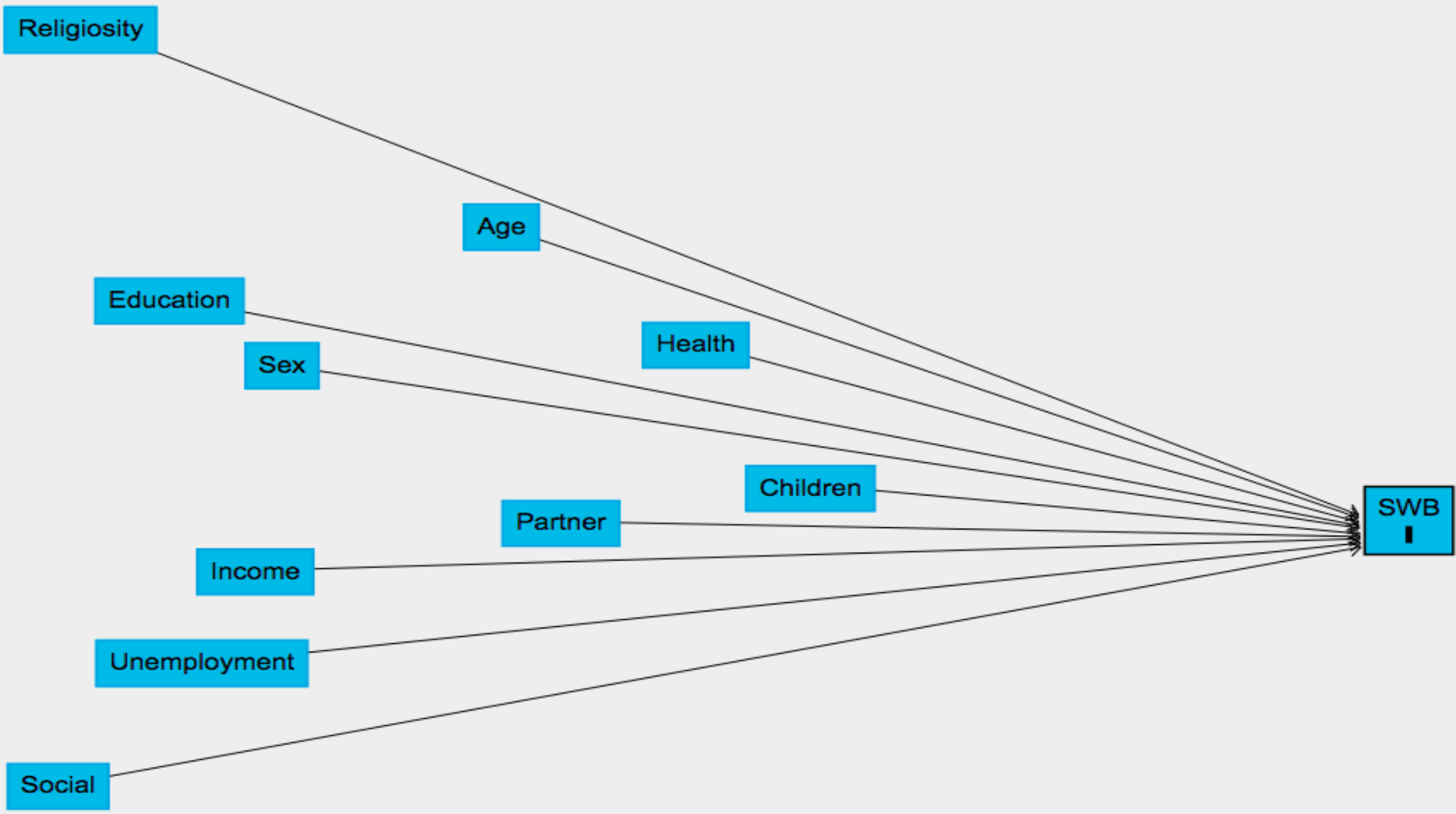|	b	p
Age	-0.07	0.000
Age^2/100	0.07	0.000
Female	0.13	0.000
Religiosity	0.07	0.000
Partner	0.52	0.000
Unemployed	-0.57	0.000
Friends	0.60	0.000
Health	-0.69	0.000
Income	0.09	0.000
Education:		
Lower secondary	0.14	0.123
Upper secondary	0.28	0.002
Vocational	0.27	0.007
Tertiary	0.41	0.000
ESS Round 5	0.10	0.001
Constant	6.34	0.000

N	28,634
Prob > F	0.000
Adjusted R^2	0.226

"Other determinants":
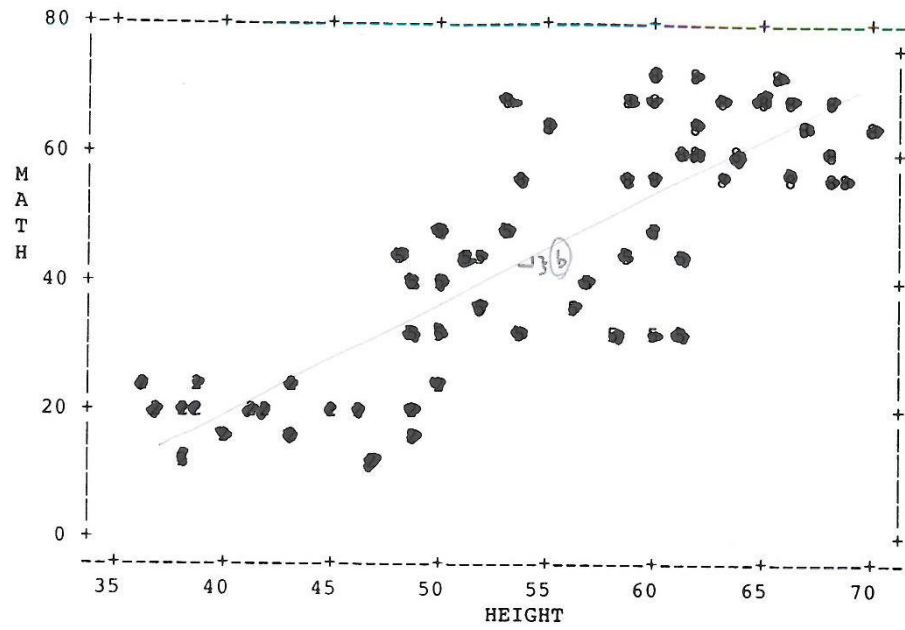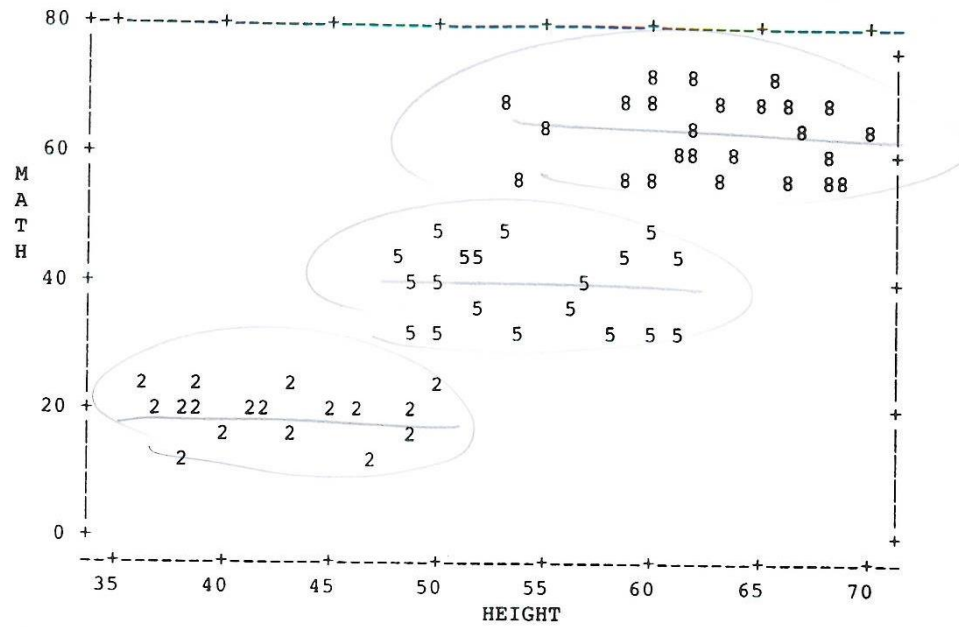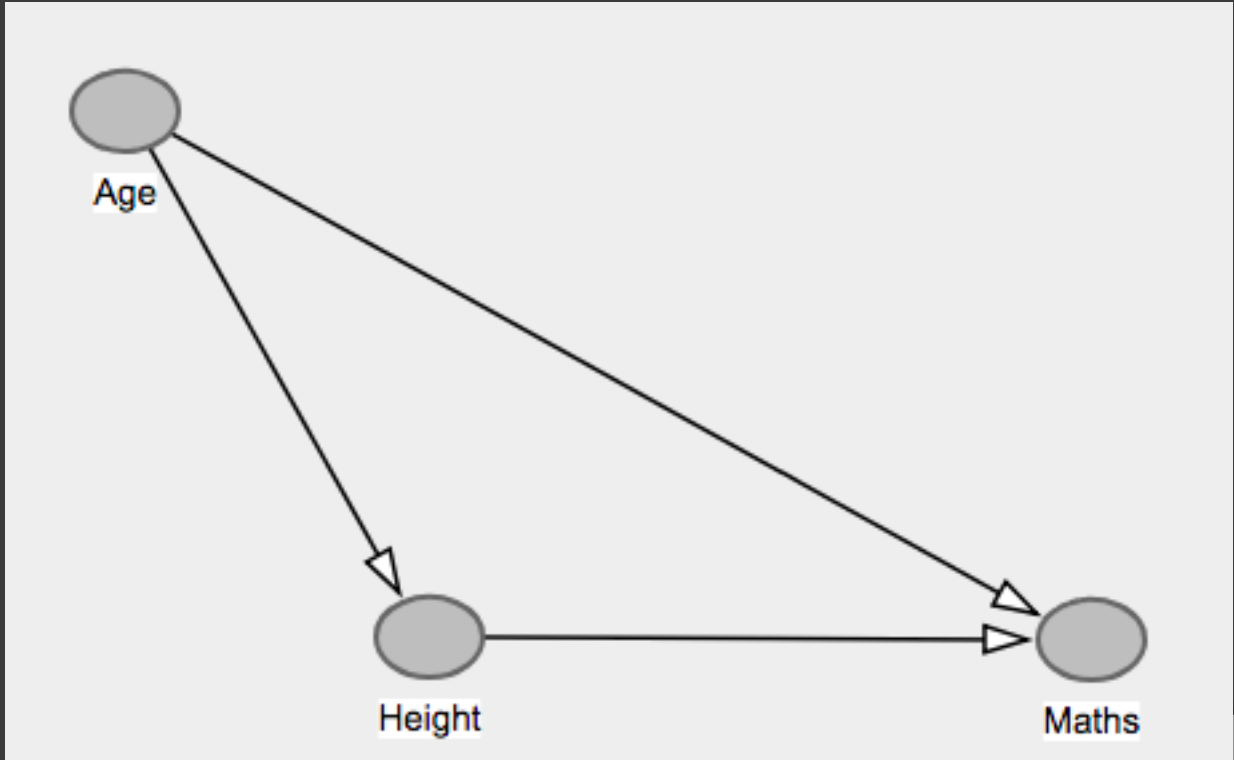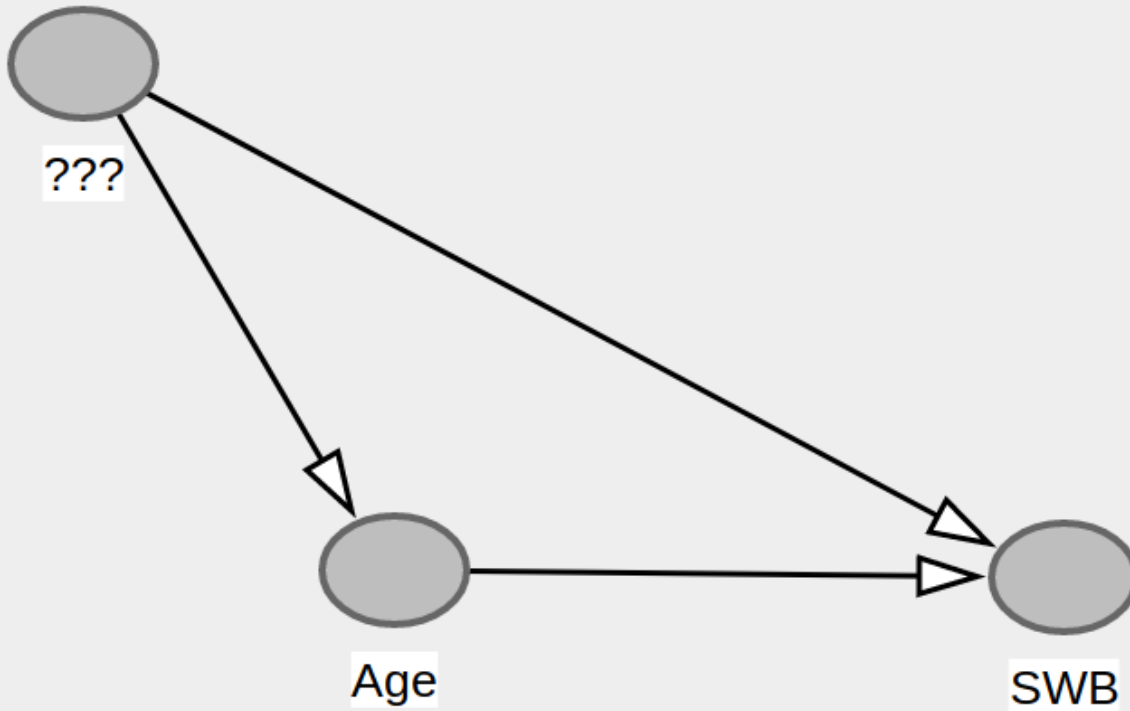
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80 +-+--------+--------+--------+--------+--------+--------+--------+--
              |                                                          +
              |                              8   8        8
              |                    8       8 8      8   8 8   8
   60 +        |              8               8          8       8
   M          |                             88   8          8
   A          |              8            8 8       8      8   88
   T          |
   H          |              5     5           5
   40 +        |         5    55            5    5
              |         5  5            5
              |            5         5
              |         5  5      5        5   5  5
              |
              |   2    2      2        2
   20 +        |   2  22    22     2  2    2
              |      2     2        2
              |      2               2
              |
    0 +        |
   ---+--------+--------+--------+--------+--------+--------+--------+--
      35       40       45       50       55       60       65       70
                                 HEIGHT
```
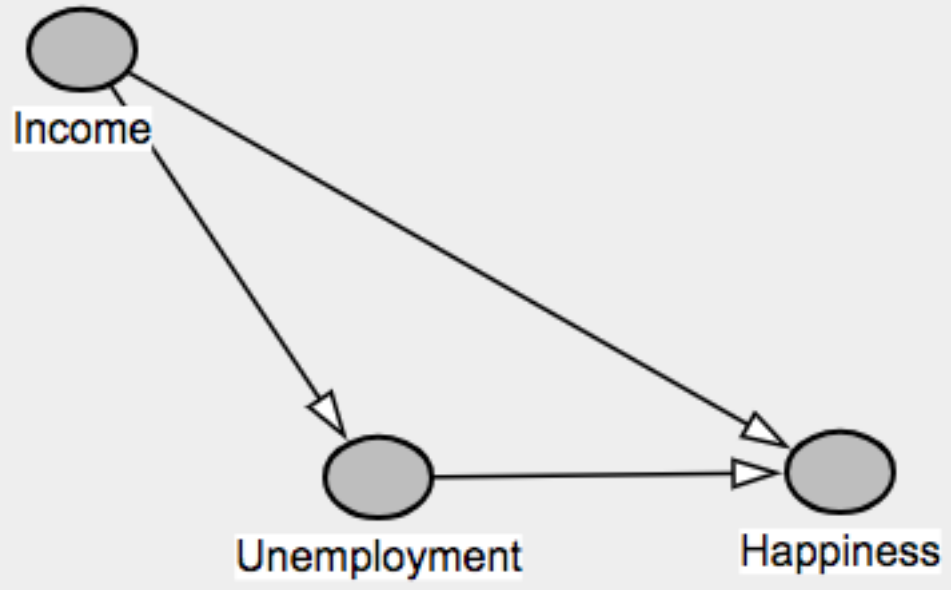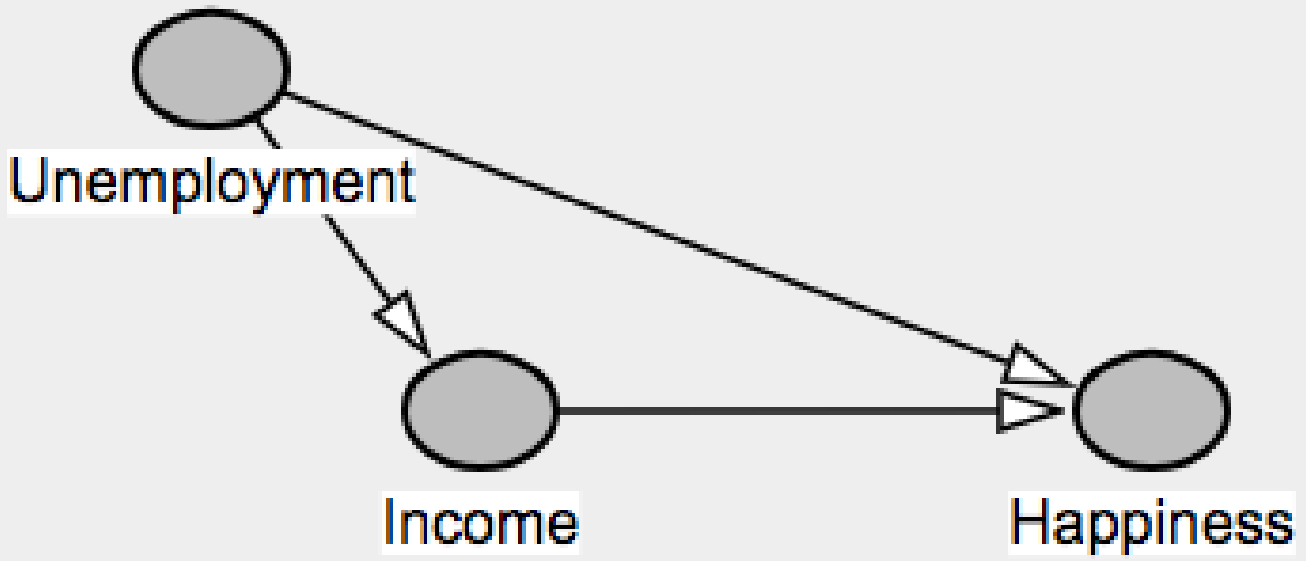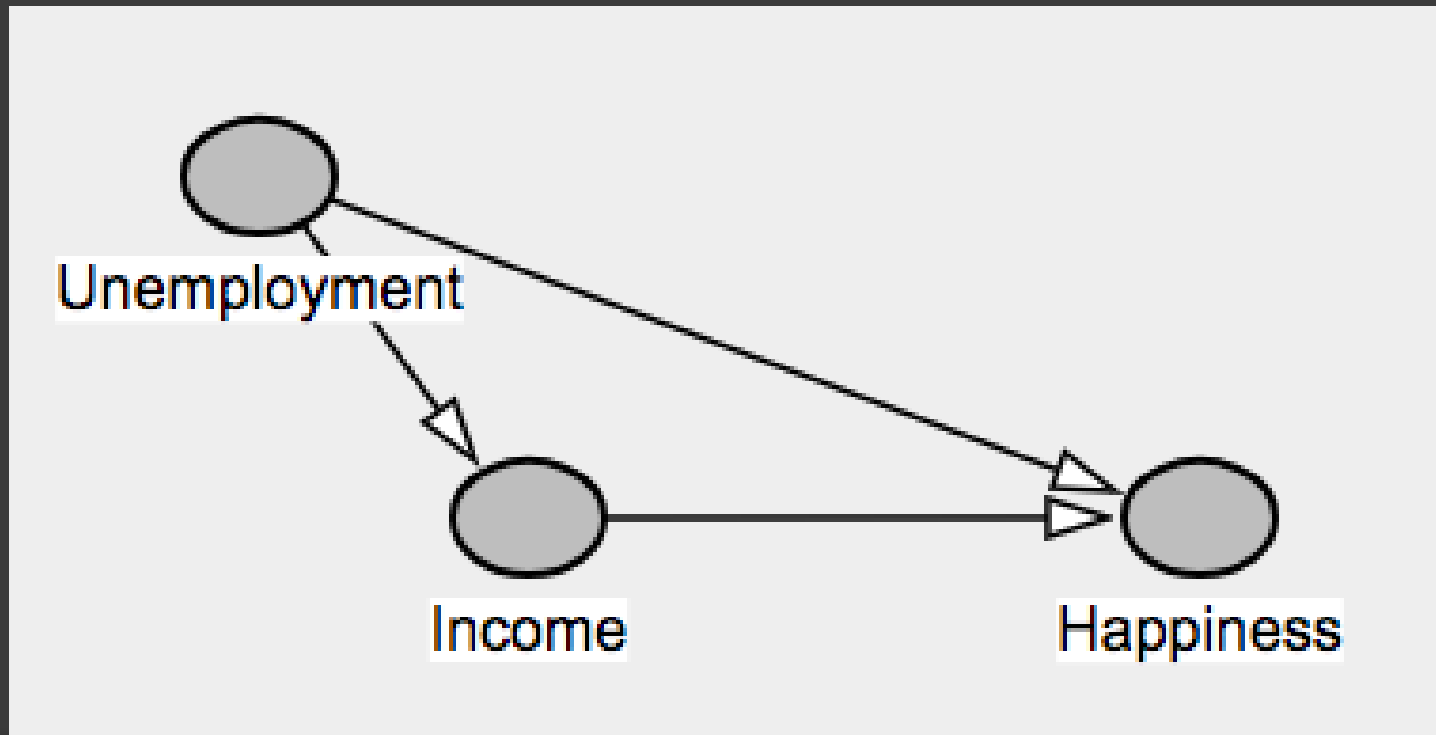
Unemployment coefficient (with income controlled): a "direct effect"

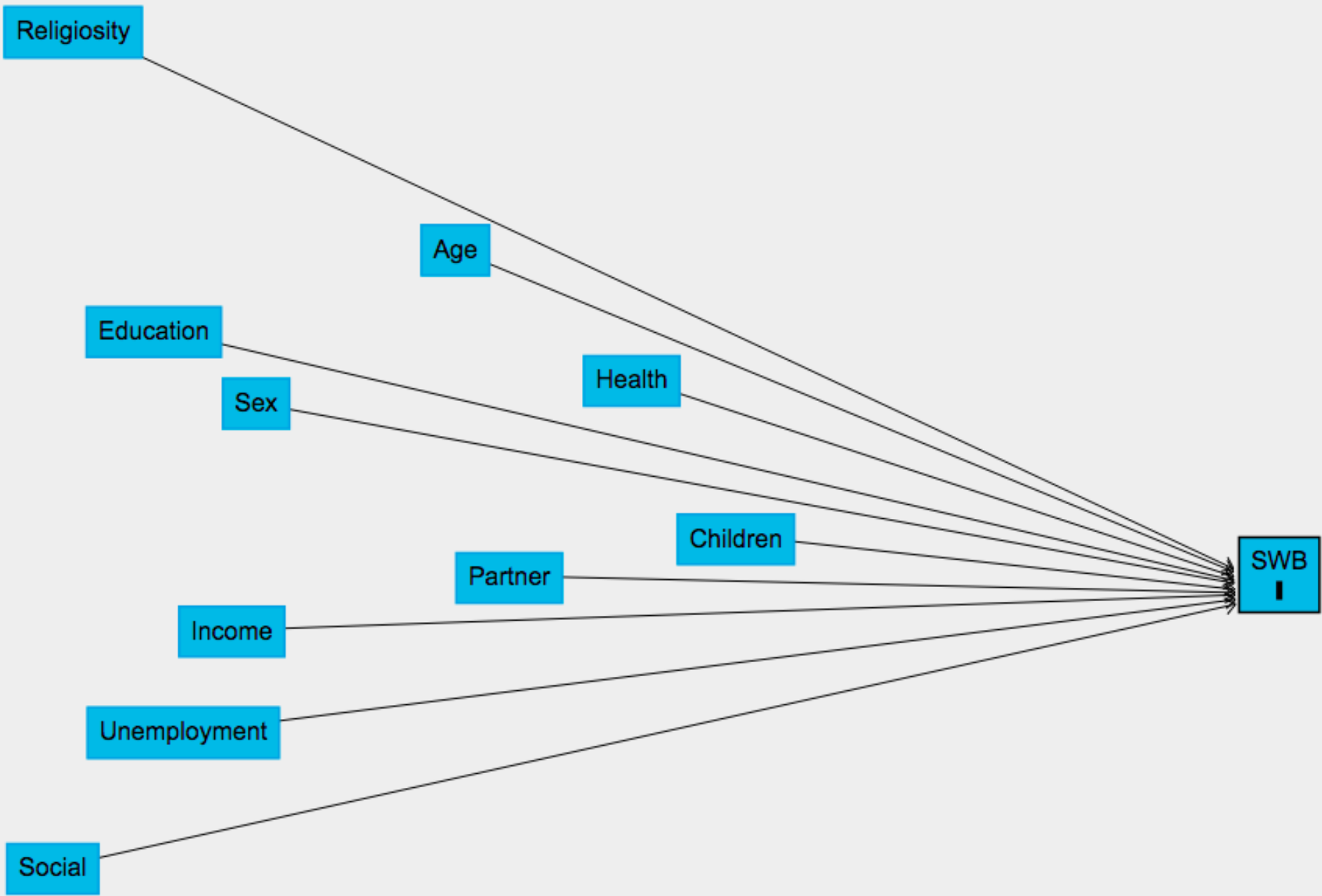Unemployment coefficient (with income controlled): a "direct effect"

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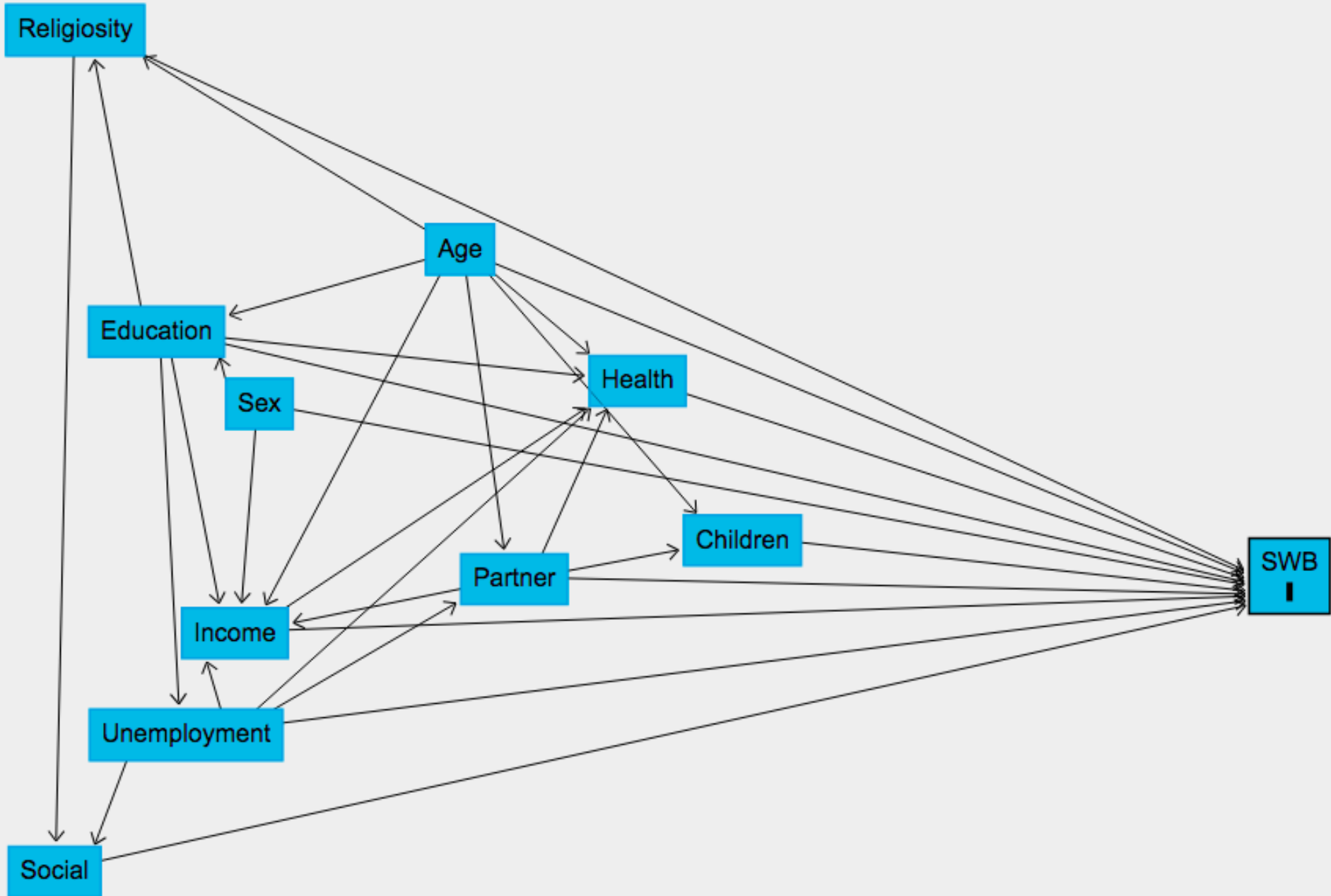
Unemployment coefficient (with income controlled): a "direct effect"

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  - "Net of the effects of ~~other~~ variables"
  - Net of the *indirect* effect *of unemployment itself*
    - Unemployment reduces income, and the lower income reduces life-satisfaction

Religiosity

Age

Education

Sex

Health

Children

Partner

Income

Unemployment

Social

SWB

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- ⊚ Control variables:
  - • Include confounders
  - • Exclude intervening variables
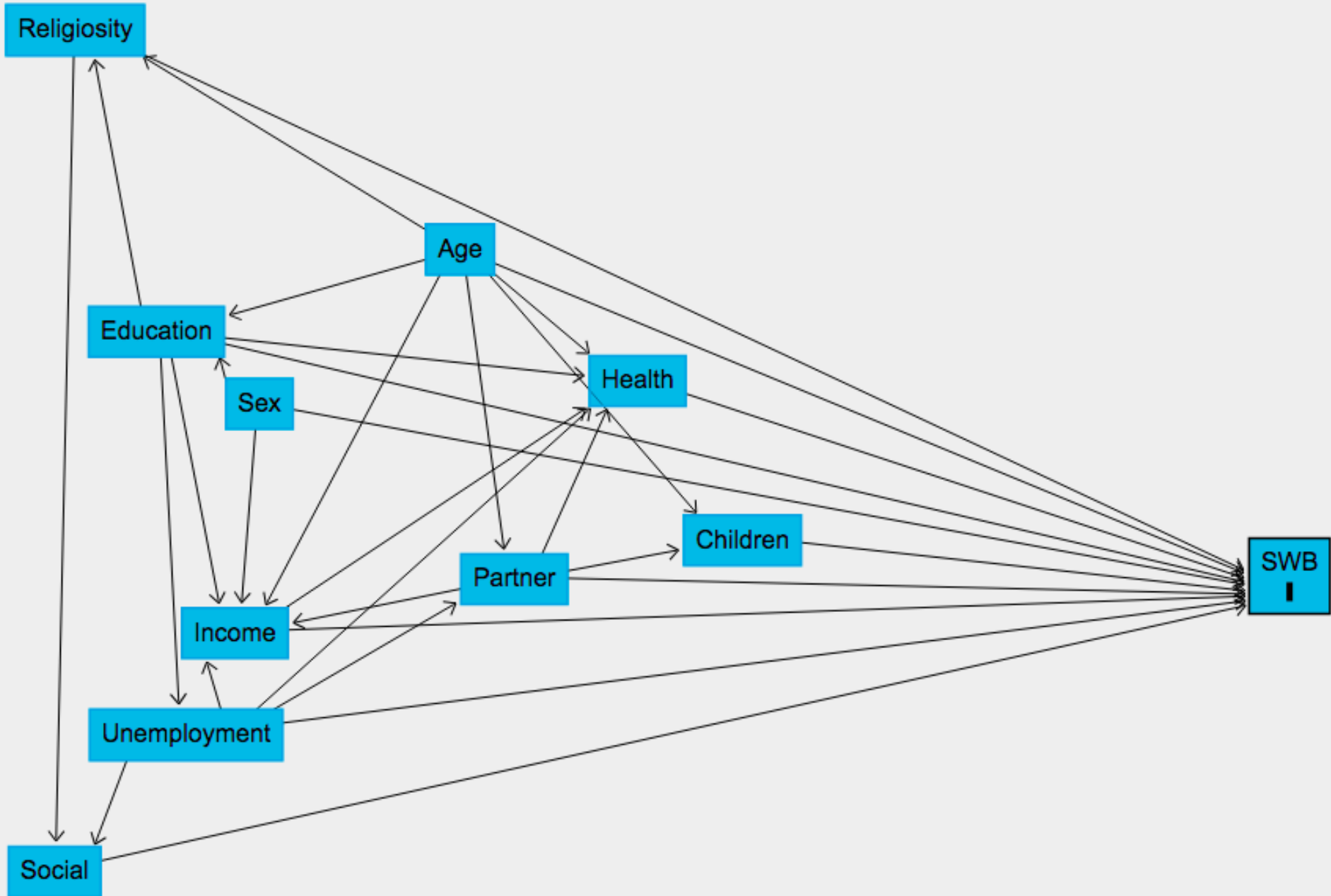
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  - If multi-country study:
    - Country
    - Sex

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    - If so, how much?

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  - Mixed effects model (cross-classified, Yang 2008)

Model of age → life satisfaction

	Under 45		
	b	s.e.	
Age	-0.012	0.001	***
Female	0.092	0.010	***
Constant	6.914	0.127	***
σ^2 Cohort	0.003	0.002	
σ^2 Survey year (period)	0.096	0.028	
σ^2 Country	0.720	0.123	
σ^2 Residual	4.912	0.016	
Likelihood ratio test Chi^2	27330.18		***
N	182,744		

*p<0.05   ** p<0.01   ***p<0.001

Model of age → life satisfaction

	Under 45			45 and older		
	b	s.e.		b	s.e.	
Age	-0.012	0.001	***	0.0023	0.0008	**
Female	0.092	0.010	***	-0.0513	0.0135	***
Constant	6.914	0.127	***	6.4372	0.149	***
σ^2 Cohort	0.003	0.002		0.0003	0.0004	
σ^2 Survey year (period)	0.096	0.028		0.0710	0.0218	
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Cohen's d (40-year change): d = (0.0023 * 40) / 2.5 = 0.037

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Model of age → life satisfaction

- Results at country level
  - U-shape: Czech Republic, Mexico, Turkey
  - Continuous increase: Australia
  - Continuous decrease: Bulgaria, Georgia, Moldova, Pakistan, Romania, Serbia, Slovenia, Spain, Ukraine

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  - Analytical angles:
    - No individual-level control variables
    - Consider effect size, not just "significance"