

# The Evolution of Belief Ambiguity During the Process of High School Choice

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Human Capital and Inequality Conference, December 2015

# Introduction I

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- **Expectations** are fundamental to schooling decisions

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  - We focus on Ambiguity and its evolution during the months before pre-enrolment into high school

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We document the evolution of Awareness

# The Study

# Study Overview I

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- **Timeline of data collection**
  - Before pre-enrollment, taken *as the main decision*
    - Wave 1: mid October 2011
    - Wave 2: mid December 2011
    - Wave 3: mid February 2012
  - Pre-enrollment deadline: February 20th 2012
  - After pre-enrollment
    - Wave 4: early April 2012

## Study Overview II

- **Schools' Sample:** 10 out of 11 agreed to participate ( $\approx 900$ )
- **Families' Sample:** 649 students and 619 parents returned a fully or partially completed questionnaire in wave 1 ( $\approx 70\%$ )
- **Survey Mode:** Paper and pencil; 60-75 min to complete; self-administered at home, but with introduction of the study and warm-up expectation question in school for the children



<b>Track</b>	<b>Sub-Track (or Curriculum)</b>
General	Art
General	Humanities
General	Languages
General	Mathematics & Science
General	Music & Choral
General	Learning and Social Sciences
Technical	Economic Sector
Technical	Technology Sector
Vocational	Services
Vocational	Industry & Crafts
Vocational	Professional Training

# Our Measures

## Eliciting Awareness about Choice Alternatives

- **Question:** What high school curricula do you know or have you heard the name of? Please mark one.
  - I know it
  - I have heard the name only
  - I have never heard of it

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- **Question:** What high school curricula do you know or have you heard the name of? Please mark one.
  - I know it
  - I have heard the name only
  - I have never heard of it
- **Proposed interpretation:**
  - 'I have never heard of' = *Unawareness about existence* of K
  - 'I have heard the name only' = *Awareness about existence* of K, but *limited knowledge about characteristics* of K
  - 'I know' = *Awareness about existence* of K and *refined knowledge about characteristics* of K

# Children's Awareness in Wave 1

<b>%</b>	<b>'Know'</b>	<b>'Heard of'</b>	<b>'Never heard of'</b>
<b>Aggregate</b>	<b>42.45</b>	<b>41.11</b>	<b>16.44</b>

# Predictors of Children's Awareness in Wave 1

## Mean Linear Regression of N of Alternatives Child

Predictors	'Know' + 'Heard of'		'Know'	
<b>female</b>	0.4144** (0.1836)	0.3800** (0.1850)	0.9285*** (0.2685)	0.8339*** (0.2687)
<b>foreign born</b>	-1.3140*** (0.3252)	-1.2743*** (0.3259)	-1.1397** (0.4754)	-1.0306** (0.4735)
<b>lives with both parents</b>	-0.3106 (0.3129)	-0.3029 (0.3126)	0.1951 (0.4575)	0.2164 (0.4541)
<b>mom college+ degree</b>	-0.8899*** (0.2955)	-0.8900*** (0.2951)	-0.2833 (0.4320)	-0.2837 (0.4287)
<b>mom has HS degree</b>	-0.6302** (0.2496)	-0.6364** (0.2493)	-0.2598 (0.3649)	-0.2769 (0.3622)
<b>has stay-home mom</b>	-0.3701* (0.2212)	-0.3481 (0.2215)	-0.2966 (0.3235)	-0.2360 (0.3218)
<b>has blue-collar dad</b>	0.0473 (0.2190)	0.0751 (0.2196)	0.2426 (0.3202)	0.3189 (0.3190)
<b>n of older siblings</b>	0.1363 (0.1251)	0.1403 (0.1250)	0.1913 (0.1829)	0.2024 (0.1816)
<b>7th-grade GPA</b>	0.2214** (0.1087)	0.1920* (0.1105)	0.0139 (0.1589)	-0.0666 (0.1605)
<b>N alt. discussed/thought</b>	—	0.0905 (0.0633)	—	0.2485*** (0.0920)
<b>constant</b>	8.1575*** (0.8692)	8.2341*** (0.8697)	4.5155*** (1.2708)	4.7257*** (1.2634)

## Eliciting Point Beliefs and Ambiguity

- **Question:** For each type of school below, what do you think would be the chances between 0 and 100 that you would obtain passing grades or higher in all subjects and would graduate in time, if you were to enroll in it?

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Curriculum	Chances out of 100	How sure are you about your answer?
(Curriculum name)	- - -	<input type="radio"/> I am sure about my answer <input type="radio"/> I am not sure about my answer <b>MIN</b> chances: ..... <b>MAX</b> chances: ..... <input type="radio"/> I have no idea about the chances



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- **Proposed interpretation:**
  - 'I have no idea about the chances' = *maximal ambiguity*
  - 'I am unsure about my answer' = *positive ambiguity*
  - 'I am sure about my answer' = *absence of ambiguity*

## Children's Point Belief in Wave 1

### Point Probabilities of Passing all Exams

	.10Q	.25Q	.50Q	.75Q	.90Q	Mean	Std.Dev.
Gen. Human	0	10	40	70	85	41.78	31.77
Gen. Lang	1	20	50	80	90	48.73	32.26
Gen. Math&Sc	5	20	55	80	94	52.81	32.72
Gen. ArtMusic	0	20	50	80	90	48.17	32.74
Gen. SocSc	0	5	<b>20</b>	50	<b>75</b>	49.58	31.06
Tech. Eco	10	25	55	80	95	52.66	31.20
Tech. Tech	10	30	60	80	95	54.49	31.58
Voc. Serv	5	30	60	85	100	55.25	33.07
Voc. Ind&Craf	0	20	50	80	100	51.23	34.26
Voc. Profess	0	20	60	90	100	57.06	35.75

N in 471-543; missing in 16.33-27.43%

**Mean Linear Regression of Child's Point Belief of Passing Curriculum:**

Predictors	Gen Hum	Gen Math	Gen Lang	Gen Art/Music	Gen Soc Sci	Tech Econ Sect	Tech Tech Sect	Voc Serv	Voc Ind	Voc Prof Train
female	-0.3904 (2.7720)	-9.9732*** (2.4960)	2.1219 (2.6728)	2.6996 (3.0062)	-1.4633 (2.6503)	-3.8708 (2.7195)	-12.6098*** (2.7718)	0.6968 (3.0550)	-0.3646 (3.0684)	-0.1461 (3.2783)
foreign born	5.5062 (4.8489)	-4.1510 (4.4376)	10.8993** (4.5667)	6.0772 (5.1581)	-0.2409 (4.6343)	-5.1832 (4.9311)	-2.0442 (4.8662)	-2.7028 (5.4390)	0.9987 (5.4535)	-5.5562 (5.7644)
lives with both parents	0.3020 (4.6332)	0.9220 (4.2318)	2.4491 (4.3869)	3.2232 (4.8635)	-3.1317 (4.4464)	3.4697 (4.6611)	5.4771 (4.7026)	-0.4306 (5.1645)	7.0435 (5.2192)	2.8902 (5.5113)
mom has college+ degree	2.5239 (4.4053)	1.7202 (4.0281)	5.9158 (4.1667)	5.0108 (4.5835)	4.4773 (4.1841)	5.0789 (4.4138)	2.9847 (4.5043)	5.2585 (4.9789)	2.6368 (4.9811)	-3.3793 (5.2213)
mom has HS degree	-0.0399 (3.7006)	3.6821 (3.3834)	3.6437 (3.4934)	5.5602 (3.9223)	3.7593 (3.5274)	4.8878 (3.7227)	4.0710 (3.7532)	7.6281* (4.1605)	6.4758 (4.1982)	3.6273 (4.3967)
has stay-home mom	-2.0579 (3.2693)	-4.3130 (2.9982)	8.2376*** (3.0819)	4.5865 (3.4898)	0.3915 (3.1306)	2.0443 (3.2838)	1.0697 (3.3220)	0.1923 (3.6509)	1.2572 (3.6848)	2.5813 (3.9093)
has blue-collar dad	-4.8475 (3.2341)	-2.0761 (3.0023)	-5.2819* (3.0554)	0.5268 (3.3815)	-4.7257 (3.1054)	-3.2384 (3.2552)	0.7741 (3.3108)	1.9136 (3.6303)	-0.2506 (3.6653)	4.2690 (3.8758)
n of older siblings	-0.3560 (1.8564)	-0.3763 (1.6922)	-1.4926 (1.7566)	-0.8994 (1.9566)	0.3057 (1.7771)	0.9013 (1.8520)	3.6330* (1.8733)	1.2780 (2.0637)	1.6541 (2.0823)	2.3228 (2.2013)
7th-grade GPA/grade	13.7428*** (1.6712)	12.4881*** (1.5810)	12.8561*** (1.5432)	8.8692*** (1.4753)	13.2541*** (1.5504)	11.0582*** (1.6120)	10.9407*** (1.6284)	7.8185*** (1.8317)	11.3989*** (1.8264)	10.3459*** (1.9683)
curr. thought on own or discussed before wave 1	14.1747*** (3.6849)	21.8164*** (2.9284)	18.6188*** (3.0714)	14.1613*** (3.8090)	15.2164*** (3.7355)	10.3676*** (4.0068)	10.3791*** (3.4990)	14.4721*** (4.9127)	6.8933 (8.3690)	10.3133 (7.7627)
knows curriculum	1.2068 (7.9463)	-0.2764 (8.5375)	8.5411 (8.0118)	16.6096*** (4.2777)	10.1415 (4.0534)	8.3477 (4.2908)	14.7241 (4.4875)	9.0740** (4.3254)	8.6139* (4.5848)	11.9797*** (4.5194)
heard of curriculum	-2.4045 (8.0366)	-5.0082 (8.8967)	3.1398 (8.1342)	1.3654 (3.8084)	2.8047 (3.8904)	0.1502 (4.1670)	6.8932 (4.4494)	11.0887*** (3.8583)	5.7666* (3.3539)	9.0545** (3.9126)
constant	-64.5426*** (14.3755)	-43.1459*** (14.4937)	-66.3020*** (14.0502)	-49.8205*** (14.1514)	-59.3635*** (12.4914)	-38.1659*** (13.4042)	-20.8819 (14.8461)	-40.1682*** (13.6348)	-46.6537*** (14.8796)	-35.1262** (15.6970)

# Children's Ambiguity in Wave 1

<b>%</b>	<b>'Sure'</b>	<b>'Unsure'</b>	<b>'No Idea of'</b>
<b>Aggregate</b>	<b>75.5</b>	<b>14.0</b>	<b>10.5</b>

# Predictors of Ambiguity in Wave 1: Poisson Regression

Predictors	'No Idea'+ 'Unsure'		'No Idea'	
<b>female</b>	-0.0178 (0.0696)	0.0040 (0.0701)	0.2684*** (0.0941)	0.2938*** (0.0946)
<b>foreign born</b>	0.2109* (0.1138)	0.1396* (0.1164)	0.0699 (0.1525)	-0.0191 (0.1557)
<b>lives with both parents</b>	0.2215** (0.1063)	0.2019 (0.1063)	0.3207** (0.1356)	0.2996** (0.1354)
<b>mom college+ degree</b>	0.0560 (0.1138)	0.0049 (0.1152)	0.0235 (0.1421)	-0.0386 (0.1441)
<b>mom has HS degree</b>	0.1336 (0.0984)	0.0938 (0.0994)	-0.1113 (0.1230)	-0.1647 (0.1247)
<b>has stay-home mom</b>	-0.2081** (0.0876)	-0.2311*** (0.0878)	-0.0522 (0.1128)	-0.0795 (0.1131)
<b>has blue-collar dad</b>	-0.0801 (0.0839)	-0.0769 (0.0839)	-0.0969 (0.1102)	-0.0909 (0.1102)
<b>n of older siblings</b>	0.0175 (0.0468)	0.026 (0.0466)	-0.0024 (0.0619)	0.0073 (0.0614)
<b>7th-grade GPA</b>	0.0692* (0.0412)	0.0792* (0.0412)	-0.0248 (0.0552)	-0.0108 (0.0552)
<b>N alt. discussed/thought</b>	-0.0433* (0.0245)	-0.0375 (0.0246)	-0.1683*** (0.0372)	-0.1608*** (0.0371)
<b>N alt. aware of</b>	—	-0.0557*** (0.0176)	—	-0.0712*** (0.0231)
<b>constant</b>	0.2160 (0.3274)	0.6770* (0.3547)	0.5279 (0.4316)	1.1075** (0.4639)

# Conceptual Framework

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In experiments people often choose **bet C** in both cases 1. & 2.

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- Choosing curriculum  $k$  makes state  $\omega_1^k$  relevant for payoffs
- Let  $C^k := \{\omega \in \Omega : \omega_1^k = 1\}$

Prior probability:  $\pi_0^k := m(C^k)$ .

# Evolution of Beliefs

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- Learning assumption: for all  $i$ ,  $\mathcal{T} \subset \mathcal{I}_3^i \subset \mathcal{I}_2^i \subset \mathcal{I}_1^i$

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- $R_0^k$  is a measure of 'model uncertainty' or ambiguity
- Note that it is an individual measure

## Learning under Ambiguity? As usual.

- If we want to **keep time consistency**, we need Bayesian **updating model-by-model** (Epstein and Schneider, 2003):

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$\Rightarrow$  **With enough information ambiguity disappears.**

## (Un)Awareness? Do not worry.

- If child does not know a curriculum exists, he simply ignores it (he does not know that he does not know it, ....)
- What if the child discovers a new curriculum, say  $j$ ?
- Karni and Vierø (2013-2015) tell us:
  - The new  $\pi_t^j$  is of course to be determined
  - Old  $\pi_t^k$  for  $k \neq j$  are as when the child did not know  $j$  existed
- Allows to not worry about limited awareness for beliefs

# Evolution in Awareness



## Children's Awareness in Wave 1

	<b>'Know'</b>	<b>'Heard of'</b>	<b>'Never heard of'</b>
<b>Aggregate</b>	<b>42.45</b>	<b>41.11</b>	<b>16.44</b>
Gen, Art	51.56	44.24	4.21
Gen, Humanities	59.81	35.67	4.52
Gen, Languages	66.04	29.13	4.83
<b>Gen, Math &amp; Science</b>	<b>73.21</b>	22.59	<b>4.21</b>
Gen, Music & Choral	31	44.70	24.30
<b>Gen, Soc Sciences</b>	<b>35.36</b>	46.42	<b>18.22</b>
<b>Tech, Economic Sector</b>	<b>35.98</b>	47.51	<b>16.51</b>
Tech, Technology Sector	42.68	43.61	13.71
Voc, Services	28.66	47.20	24.14
<b>Voc, Industry &amp; Crafts</b>	<b>17.60</b>	46.11	<b>36.29</b>
Voc, Prof Training	25.08	45.02	29.91

## Children's Awareness in Wave 3

	<b>'Know'</b>	<b>'Heard of'</b>	<b>'Never heard of'</b>
<b>Aggregate</b>	<b>61.54</b>	<b>32.95</b>	<b>5.51</b>
Gen, Art	70.13	28.10	1.77
Gen, Humanities	77.43	21.02	1.55
Gen, Languages	78.54	20.35	1.11
<b>Gen, Math &amp; Science</b>	<b>84.73</b>	13.50	<b>1.77</b>
Gen, Music & Choral	47.79	45.13	7.08
<b>Gen, Soc Sciences</b>	<b>62.39</b>	33.63	<b>3.98</b>
<b>Tech, Economic Sector</b>	<b>55.75</b>	39.16	<b>5.09</b>
Tech, Technology Sector	60.84	34.51	4.65
Voc, Services	49.34	40.71	9.96
<b>Voc, Industry &amp; Crafts</b>	<b>39.82</b>	47.35	<b>12.83</b>
Voc, Prof Training	50.22	38.94	10.84

# Transitions in Awareness I: Wave 1 to Wave 3

## UNCONDITIONAL

	Know	Heard	NoHeard	N
Know	0.86	<b>0.13</b>	<b>0.01</b>	1333
Heard	0.47	0.48	<b>0.05</b>	1194
NoHear	0.33	0.52	0.15	443

Children who responded to both W1 & W3

## Transitions on Awareness II: Wave 1 to Wave 2

### Ranked Bottom W1

	Know	Heard	NoHeard	$\chi^2$
Know	0.79	<b>0.20</b>	<b>0.01</b>	(***)
Heard	0.40	0.55	<b>0.06</b>	(***)
NHear	0.24	0.52	0.24	

### Ranked First W1

	Know	Heard	NoHeard	N
Know	0.97	<b>0.03</b>	<b>0.00</b>	267
Heard	0.72	0.22	<b>0.06</b>	49
NHear	0.50	0.38	0.12	<b>16</b>

Children who responded to both W1 & W2

# Evolution in Ambiguity

## Children's Ambiguity in Wave 1

	<b>'Sure'</b>	<b>'Unsure'</b>	<b>'No Idea'</b>
<b>Aggregate</b>	<b>76.44</b>	<b>13.10</b>	<b>10.47</b>
Gen., Humanities	76.2	14.97	8.82
Gen., Languages	79.84	13.44	6.72
Gen., Math&Science	76.74	17.11	6.15
Gen., Art or Music	77.13	15.16	7.71
Gen., Social Sciences	74.32	16.49	9.19
Tech., Economic Sec.	75	16.85	8.15
Tech., Techn. Sec.	77.38	12.53	10.08
Voc., Services	73.7	10.41	15.89
Voc., Ind.&Crafts	77.62	6.91	15.47
Prof. Develop. Train.	76.39	6.67	16.94

## Children's Ambiguity in Wave 3

	<b>'Sure'</b>	<b>'Unsure'</b>	<b>'No Idea'</b>
<b>Aggregate</b>	<b>80.96</b>	<b>5.72</b>	<b>13.32</b>
Gen., Humanities	87.22	5.4	7.39
Gen., Languages	87.32	5.92	6.76
Gen., Math&Science	85.43	6.57	8
Gen., Art or Music	85.31	5.65	9.04
Gen., Social Sciences	81.48	7.41	11.11
Tech., Economic Sec.	80.17	7.08	12.75
Tech., Techn. Sec.	76.82	6.42	16.76
Voc., Services	74.93	4.84	20.23
Voc., Ind.&Crafts	75.07	3.97	20.96
Prof. Develop. Train.	75.85	3.98	20.17

# Transitions in Ambiguity I: Wave 1 to Wave 3

## UNCONDITIONAL

	Sure	Unsure	NoIdea	N
Sure	0.86	<b>0.02</b>	<b>0.12</b>	1790
Unsure	0.64	0.17	<b>0.19</b>	247
No Idea	0.51	0.03	0.46	287

Children who responded to both W1 & W3



# Ambiguity Transitions II: Wave 1 to Wave 2

## Ranked Bottom W1

	Sure	Unsure	Noldea	$\chi^2$
Sure	0.84	<b>0.02</b>	<b>0.14</b>	(***)
Unsure	0.67	0.17	<b>0.16</b>	
Noldea	0.55	0.05	0.40	

## Ranked First W1

	Sure	Unsure	Noldea	N
Sure	0.92	<b>0.02</b>	<b>0.06</b>	248
Unsure	0.68	0.22	<b>0.10</b>	40
Noldea	1.00	0.00	0.00	<b>5</b>

Children who responded to both W1 & W2

# Ambiguity Transitions III: Wave 1 to Wave 3

## UNCONDITIONAL

	Sure	Unsure	Noldea	$\chi^2$
Sure	0.86	<b>0.02</b>	<b>0.12</b>	(***)
Unsure	0.71	0.15	<b>0.14</b>	
Noldea	0.58	0.04	0.39	

## CHOSEN

	Sure	Unsure	Noldea	N
Sure	0.93	<b>0.02</b>	<b>0.01</b>	149
Unsure	0.73	0.22	<b>0.05</b>	22
Noldea	0.43	0.14	0.43	<b>7</b>

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# Evolution in Beliefs and Ranges

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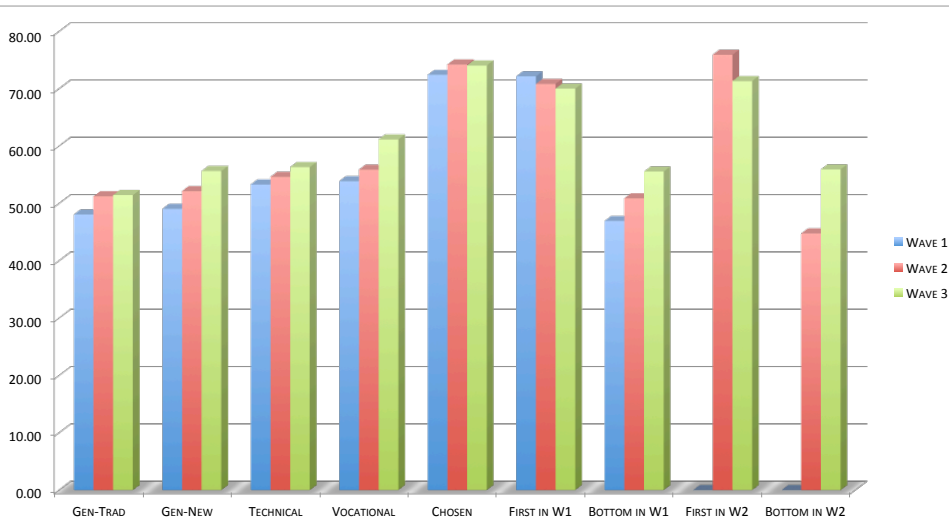
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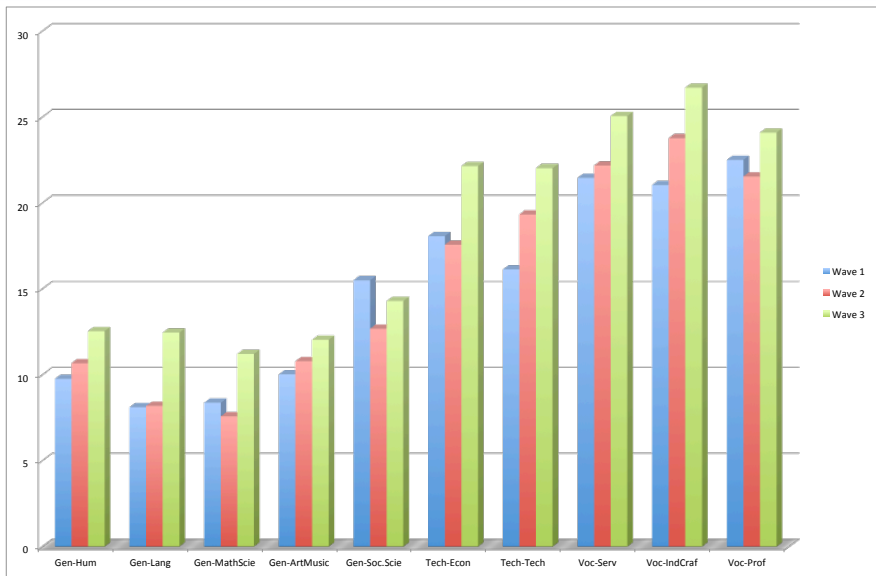
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- We can hence study their **average evolution** across alternatives

# Evolution of the Point Beliefs

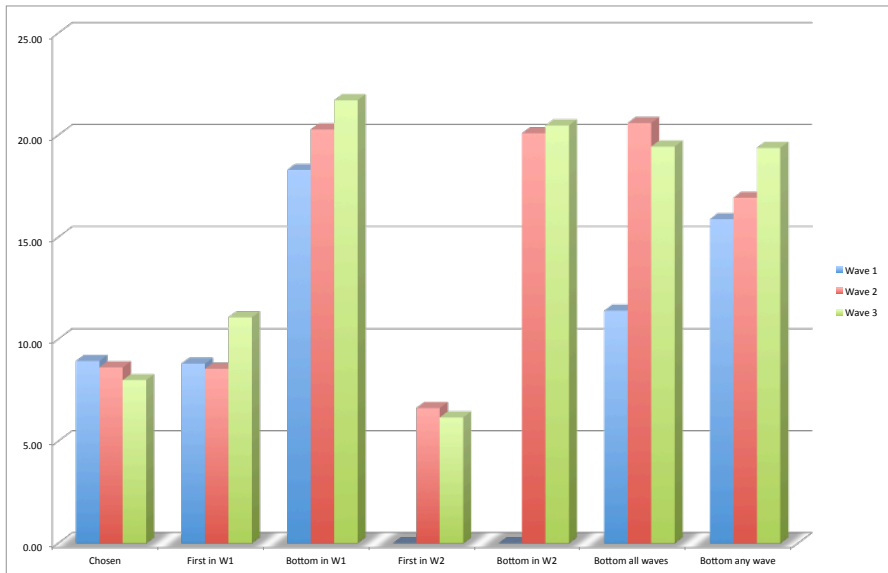


# Evolution of the Ambiguity Ranges I: Alternatives





# Evolution of the Ambiguity Ranges II: Ranking



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  - Incorporate into choice, process for learning or bias generation

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- Future: see how beliefs react to grades (observable shocks)

<b>Sample Characteristics I</b>	<b>Children W1 Sample (N=649)</b>	<b>Children W1&amp;W3 Sample (N=410)</b>
<b>Child's gender</b>		
% male	46.53	43.17
% female	53.47	56.83
<b>Child's place of birth</b>		
% Italy	86.36	88.02
<b>Child's age</b>		
mean	13.0929	13.0732
std. dev.	0.4249	0.4072
<b>Child's age vs. school grade</b>		
% regular (born in 1998)	83.9	85.12
% ahead (born after 1998)	3.87	4.15
% behind (born before 1998)	12.23	10.73
<b>Child's GPA (out of 10)</b>		
mean	7.6541	7.7405
std. dev.	0.9663	0.9719
<b>Parent/s' child lives with</b>		
% both parents	87.84	88.2
% one parent	11.66	11.44
% none	0.51	0.35
<b>Number of older siblings</b>		
mean	0.6248	0.5594
std. dev.	0.7636	0.6966

<b>Sample Characteristics II</b>	<b>Children W1 Sample (N=649)</b>	<b>Child W1&amp;W3 Sample (N=410)</b>
<b>Mother's country of birth</b> % Italy	87.79	82.7
<b>Father's place of birth</b> % Italy	81.16	83.03
<b>Mother's school degree</b> elementary or less	2.37	1.85
junior high school	20.14	18.78
HS diploma (includes 3-yrs vocational)	50.08	52.12
college degree or higher	27.41	27.25
<b>Father's school degree</b> elementary or less	1.94	1.62
junior high school	21.3	22.16
HS diploma (includes 3-yrs vocational)	50.35	50.81
college degree or higher	26.41	25.41
<b>Mother's working status</b> full-time	39.43	41.04
part-time	37.58	36.36
does not work	22.90	22.60
<b>Father's working status</b> full-time	92.06	91.84
part-time	4.32	4.21
does not work	3.63	3.95



## Awareness in W1: Poisson Regression of N of Alternatives Child is Aware of

Predictors	'Know' + 'Heard of'		'Know'	
<b>female</b>	0.0443 (0.0327)	0.0408 (0.0330)	0.1901*** (0.0456)	0.1725*** (0.0459)
<b>foreign born</b>	-0.1501** (0.0616)	-0.1458** (0.0618)	-0.2538*** (0.0879)	-0.2310*** (0.0882)
<b>lives with both parents</b>	-0.0335 (0.0566)	-0.0326 (0.0566)	0.0393 (0.0754)	0.0449 (0.0755)
<b>mom college+ degree</b>	-0.0941* (0.0521)	-0.0941* (0.0521)	-0.0572 (0.0720)	-0.0575 (0.0721)
<b>mom has HS degree</b>	-0.0660 (0.0437)	-0.0667 (0.0437)	-0.0518 (0.0605)	-0.0557 (0.0606)
<b>has stay-home mom</b>	-0.0397 (0.0396)	-0.0374 (0.0397)	-0.0611 (0.0551)	-0.0484 (0.0553)
<b>has blue-collar dad</b>	0.0057 (0.0390)	0.0085 (0.0392)	0.0503 (0.0535)	0.0650 (0.0537)
<b>n of older siblings</b>	0.0145 (0.0222)	0.0149 (0.0222)	0.0389 (0.0305)	0.0413 (0.0304)
<b>7th-grade GPA</b>	0.0236 (0.0193)	0.0205 (0.0197)	0.0035 (0.0267)	-0.0124 (0.0271)
<b>N alt. discussed/thought</b>	—	0.0094 (0.0111)	—	0.0484*** (0.0149)
<b>constant</b>	2.1055*** (0.8692)	2.1140*** (0.1552)	1.4985*** (0.2137)	1.5387*** (1.2137)

## Awareness in W3: Poisson Regression of N of Alternatives Child is Aware of

Predictors	'Know' + 'Heard of'		'Know'	
female	-0.0057 (0.0468)	-0.0067 (0.0467)	0.0529 (0.0577)	0.0536 (0.0577)
foreign born	-0.0633 (0.0863)	-0.0501 (0.0867)	-0.1102 (0.1066)	-0.0751 (0.1074)
lives with both parents	-0.0207 (0.0815)	-0.0111 (0.0817)	-0.0440 (0.1014)	-0.0048 (0.1023)
mom college+ degree	-0.0350 (0.0766)	-0.0092 (0.0784)	0.1127 (0.0950)	0.2037** (0.0957)
mom has HS degree	-0.0334 (0.0650)	-0.0198 (0.0656)	0.0541 (0.0807)	0.0935 (0.0807)
has stay-home mom	-0.0033 (0.0543)	-0.0010 (0.0544)	0.1345** (0.0661)	0.1091 (0.0664)
has blue-collar dad	-0.0376 (0.058)	-0.0348 (0.0586)	-0.0227 (0.0717)	-0.0728 (0.0719)
n of older siblings	0.0099 (0.0317)	0.0103 (0.0317)	-0.0809** (0.0399)	-0.0507 (0.0408)
7th-grade GPA	-0.0052 (0.0267)	-0.0074 (0.0268)	-0.0967*** (0.0330)	-0.0769** (0.0332)
N alt. discussed/thought in W1	0.0013 (0.0151)	-0.0021 (0.0153)	0.0404** (0.0181)	0.0083 (0.0187)
N alt. aware/knows in W1	—	0.0196 (0.0130)	—	0.0857*** (0.0103)
constant	2.4403*** (0.2113)	2.2611*** (0.2429)	2.5634 (0.2598)	1.9441 (0.2748)

# Predictors of Ambiguity in Wave 3: Poisson Regression

Predictors	'No Idea'+ 'Unsure'		'No Idea'	
<b>female</b>	0.3881*** (0.1066)	0.3897*** (0.1073)	0.4246*** (0.1192)	0.4085*** (0.1200)
<b>foreign born</b>	0.3712*** (0.1621)	0.2420 (0.1664)	0.3447* (0.1930)	0.2352 (0.1965)
<b>lives with both parents</b>	0.3509** (0.1517)	0.2717* (0.1538)	0.4586*** (0.1728)	0.3995** (0.1745)
<b>mom college+ degree</b>	-0.7517** (0.1582)	-0.9077*** (0.1624)	-1.0723*** (0.1726)	-1.2621*** (0.1789)
<b>mom has HS degree</b>	-0.4574*** (0.1285)	-0.5435*** (0.1311)	-0.7847*** (0.1374)	-0.9048*** (0.1420)
<b>has stay-home mom</b>	-0.3120*** (0.1215)	-0.3239*** (0.1214)	-0.2153 (0.1329)	-0.2295* (0.1328)
<b>has blue-collar dad</b>	-0.2636** (0.1295)	-0.3150** (0.1321)	-0.7061*** (0.1586)	-0.7555*** (0.1613)
<b>n of older siblings</b>	0.0795** (0.0670)	0.0777 (0.0666)	-0.0596 (0.0802)	-0.0538 (0.0792)
<b>7th-grade GPA</b>	0.0916 (0.0573)	0.0993* (0.0564)	0.1010 (0.0658)	0.1238* (0.0647)
<b>N alt. discussed/thought</b>	-0.0912** (0.0363)	-0.0682* (0.0363)	-0.2503*** (0.0472)	-0.2218*** (0.0468)
<b>N alt. aware of</b>	—	-0.1222*** (0.0254)	—	-0.1340*** (0.0288)
<b>constant</b>	0.4760 (0.4527)	1.6219*** (0.4991)	0.7520 (0.5169)	1.9055*** (0.5556)