

Tables and figures for paper

Independent Research Group working paper 2/2000

Displacement or selection?

Two explanations for the increasing labor market vulnerability of less-educated persons

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Chart 1: Perception of job placement by the two hypotheses

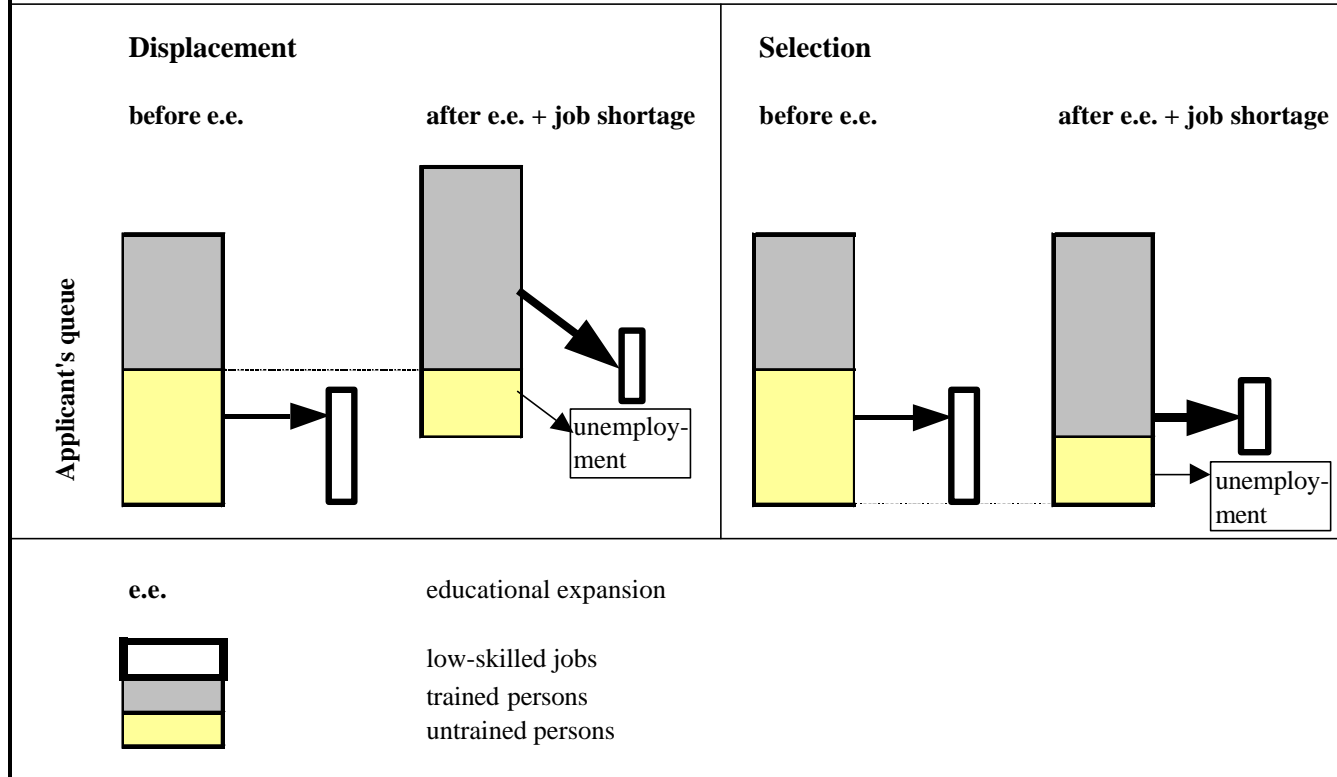
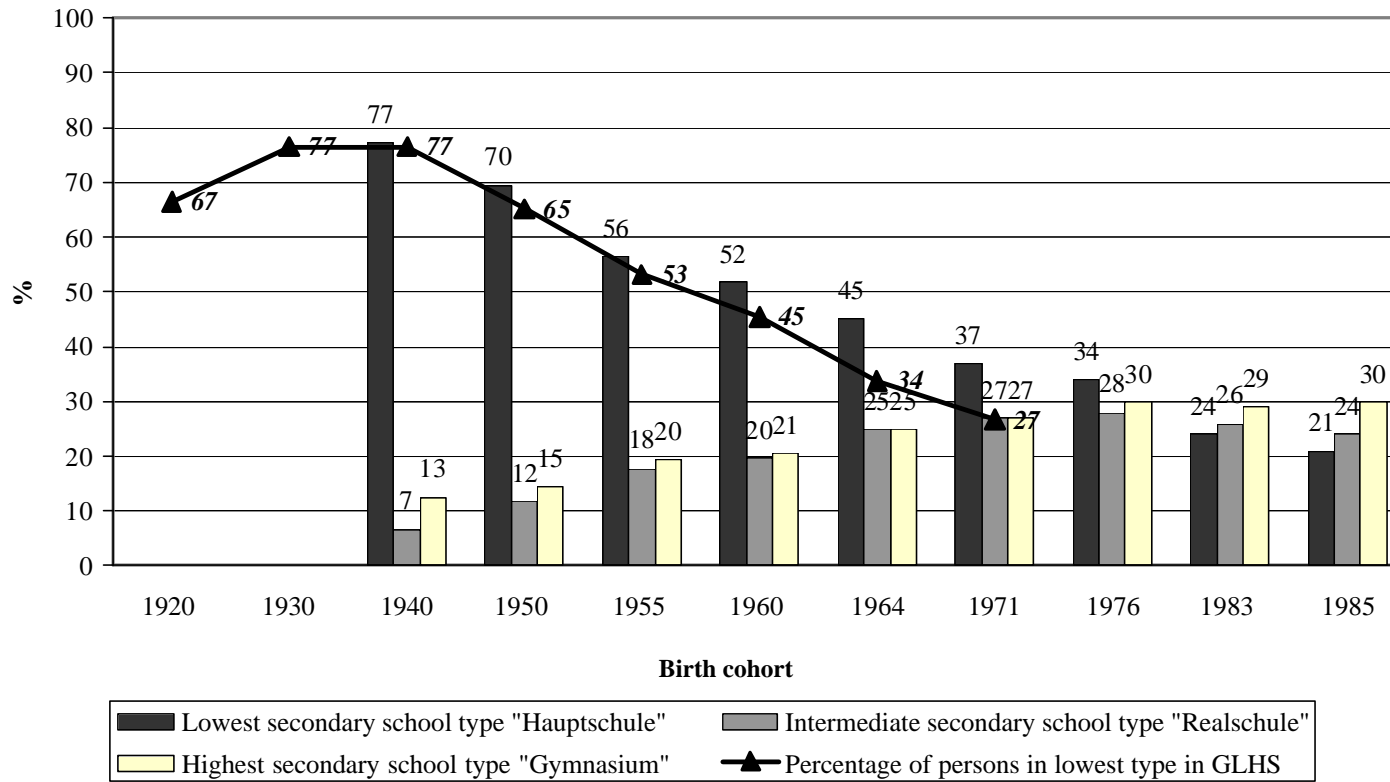


Figure 1:
Percentage of 13 year-olds in different secondary school types in West Germany



The bars include also young persons with foreign origin, who especially since the birth cohort 1960 contribute to the percentage of “Hauptschule”. In difference, the line based on the German Life History Study only includes native Germans (and not persons with foreign origin). The difference to 100 percent = special schools for “disabled” youth, comprehensive schools, Waldorf and private schools.

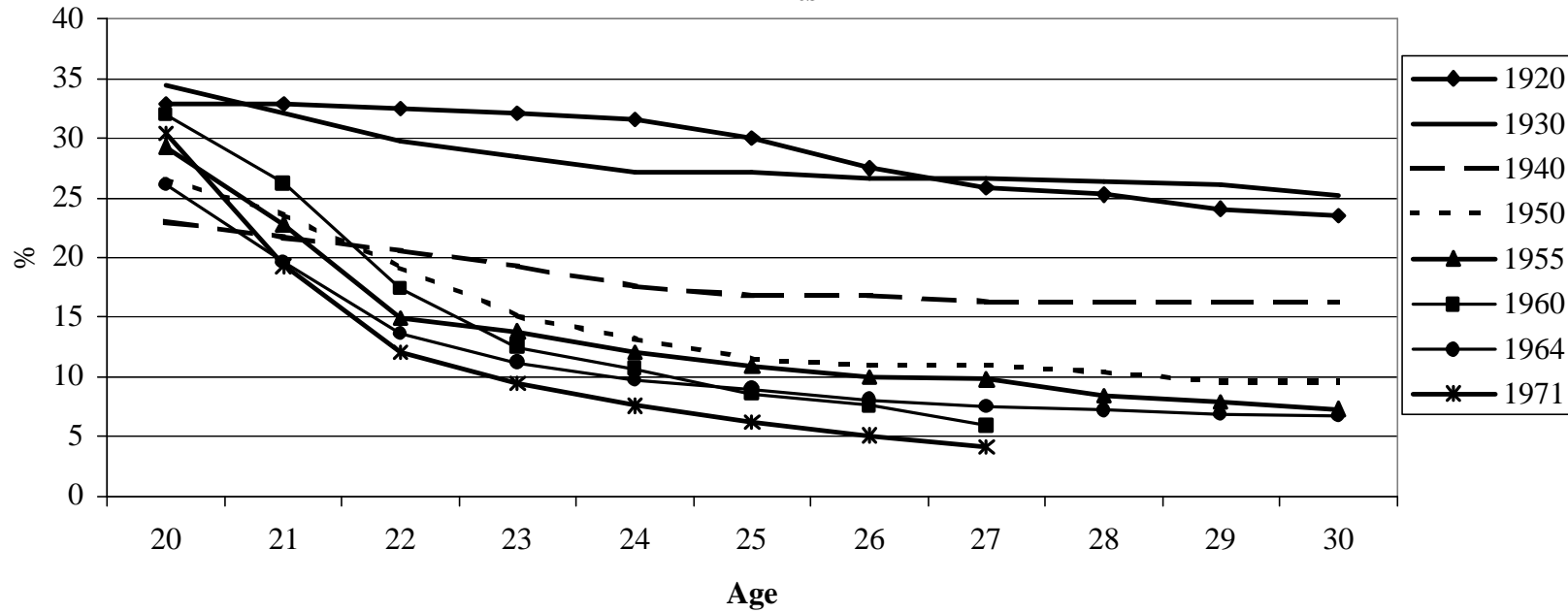
Sources for the BARS:

- | | |
|---|--|
| Cohorts 1940, 1950, 1955, 1960 | Hüfner and Naumann (1977, 235) |
| Cohorts 1964, 1976 | Köhler (1992, 30) |
| Cohort 1971 | Datenreport (1985) |
| Cohort 1983 (West- and East Germany together) | Grund- und Strukturdaten (1997/98, 66) |
| Cohort 1985 (West- and East Germany together) | Datenreport (1999) |

Source for LINE:

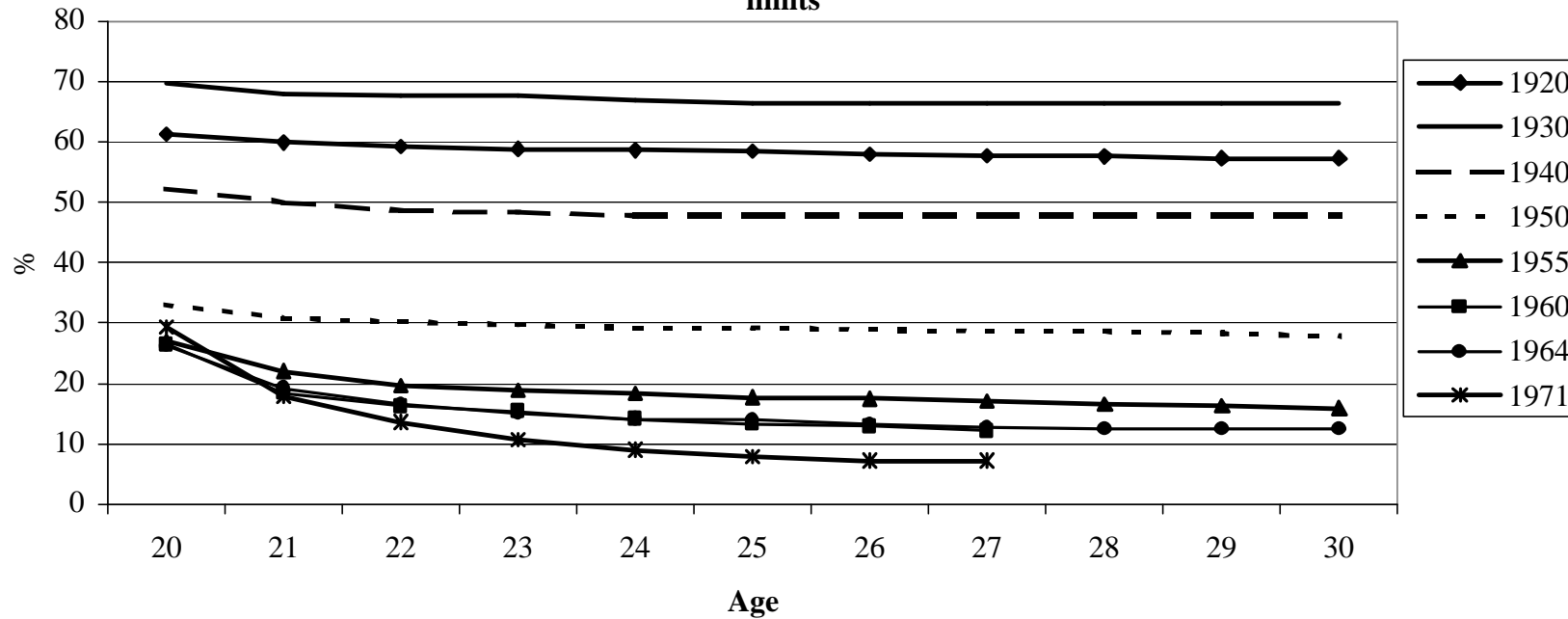
German Life History Study, Max Planck Institute for Human Development, Berlin.; for the 1964/1971-Kohorte: Study by Max Planck Institute for Human Development and the Institute for Employment Research (IAB)

Figure 2a:
Percentage of West German MEN who have not (yet) completed a vocational degree by age limits



Source: Own calculations, German Life History Study, Max Planck Institute for Human Development, Berlin.

Figure 2b:
Percentage of West German WOMEN who have not (yet) completed a vocational degree by age limits



Source: Own calculations, German Life History Study, Max Planck Institute for Human Development, Berlin,; for the 1964/1971-Kohorte: Study by Max Planck Institute for Human Development and the Institute for Employment Research (IAB)

Table 1: Percentage of West Germans who have not (yet) completed a first vocational degree by age limits

no training completed	AT AGE ...						25	26	27	<i>at age 27 - still in training</i>	28	29	30	at time of interview	<i>still in training</i>	N	Age at interview
	20	21	22	23	24												
total cohort																	
1920	50	49	49	48	48	47	46	45	2	45	44	44	42	0	1408	65	
1930	52	50	49	48	47	47	47	47	1	47	47	46	45	9	707	50	
1940	37	35	34	33	32	32	32	32	2	32	32	32	31	0	728	40	
1950	30	27	25	22	21	20	20	20	5	20	19	19	19	2	731	30	
1955	28	23	17	16	15	14	14	13	5	12	12	11	10	1	1007	33	
1960	29	22	17	14	12	11	10	9	8				9	4	1000	27	
1964	26	19	15	13	12	11	11	10	5	10	10	10	9	1	1313	34	
1971	30	19	13	10	8	7	6	6	6				6	6	1242	27	
																N = 4129	

Definition of the variable used:

0 = not training completed (this group is displayed in the table)

1 = first vocational or academic degree completed

2 = in education at time point considered

Source: Own calculations, German Life History Study, Max Planck Institute for Human Development, Berlin,; for the 1964/1971-Kohorte: Study by Max Planck Institute for Human Development and the Institute for Employment Research (IAB)

Table 2: Occupations of first job by vocational degree completed at age 25 (in %)

Major groups of ISCO 1968	a) Persons without completed vocational degree (and who are not in training)				b) Persons with completed vocational training*				c) Distribution total population			
	1930	1940	1950	1960	1930	1940	1950	1960	1930	1940	1950	1960
1	4	4	5	5	4	11	13	13	7	12	19	19
3	3	16	21	17	10	13	22	22	7	14	22	22
4	5	3	8	12	7	11	11	14	6	8	9	13
5	20	22	17	18	7	6	10	10	13	11	11	10
6	37	24	11	3	13	4	2	2	23	10	3	2
7	14	16	18	8	15	12	5	5	14	12	7	4
8	5	5	7	9	27	28	26	24	16	20	20	19
9	12	10	13	28	16	14	10	10	13	12	9	11
N (first job)	279	191	113	97	293	397	432	607	610	631	619	888
N (first job: soldier)	0	0	4	4	1	6	6	18	1	6	14	36
N (missing ISCO)	34	32	21	1	34	49	44	2	73	81	71	3
N (no first job)	20	9	12	7	4	2	4	13	24	12	29	74
%N (no first job)	6%	4%	8%	6%	1%	0.5%	1%	2%	3%	2%	4%	7%
N (total)	333	232	150	109	332	454	486	640	708	730	733	1001

* Persons with "Abitur" are excluded.

- 1 Professionals and associate technicians
 - 3 Clerks
 - 4 Sales workers
 - 5 Service workers
 - 6 Agricultural and fishery workers
 - 7 Mining and related workers/mining-, mineral- and chemical-processing-plant operators/workers in wood, textile, leather and related materials/food processing workers
 - 8 Metal, machinery and related trade workers/wood treater and cabinet-makers/precision workers in metal and related material/shoemaking workers
 - 9 Construction workers and related trade workers/Printing workers/transport workers/unskilled laborers
- (Except very few single cases, there was no first job in ISCO major group 2.)

Source: Own calculations, German Life History Study, Max Planck Institute for Human Development, Berlin.

Table 3: Employment in low-skilled jobs (first job) – by cohort and gender (in percent)

(N = 2844; Risk group: all persons who have entered first job, not having foreign origin)

Cohort	Total sample size / low-skilled employees (%)	% of unskilled manual jobs	% in men	Thereof % of unskilled manual jobs	% in women	Thereof % of unskilled manual jobs	% of women among low-skilled employees
1930	708/353 (49.9%)	71.7	37.0	82.2	62.4	65.6	63.4
1940	730/308 (42.2%)	48.7	22.9	65.1	62.5	42.3	72.1
1950	733/238 (32.5%)	34.0	19.2	40.0	45.7	31.5	70.6
1960	1001/282 (28.2%)	46.1	24.0	50.4	32.5	42.8	56.4

Low-skilled job = unskilled manual or low-skilled non-manual job.

Source: Own calculations, German Life History Study, Max Planck Institute for Human Development, Berlin.

Table 4: Binary logistic regression on being employed in a low-skill job (first job) - pooled cohort model (odds ratios: Exp(B))

(N-total = 3035, N-unskilled manual workers = 1122; Risk group: all persons who have entered first job, not having foreign origin)

	Model 1	Model 2	Model 3	Model 4
Gender (0=male/1=female)	3.06	3.12	2.27	2.31
Mother's vocational education (Ref.: holding a vocational degree)				
Without a vocational degree	1.39	1.23	n.s.	n.s.
Occupational position of the head of the household (mostly father) (Ref.: qualified job)				
Unskilled manual/low-skilled non-manual job	1.93	1.91	1.82	1.83
Not employed	2.03	1.61	1.67	1.66
family size - 4 and more children (0=no, 1=yes)	<i>1.17</i>	n.s.	n.s.	n.s.
"Stressful family situation" (0=no/1=yes)	1.43	1.39	1.33	1.31
Cohort (Ref: 1930)				
1940		0.77	n.s.	n.s.
1950		0.52	0.78	0.73
1960		0.43	0.79	0.61
Respondent's vocational education (Ref.: vocational degree completed)				
<i>No</i> vocational degree completed until age 25			5.66	4.31
No vocational degree completed, but in training at age 25			n.s.	n.s.
Interaction term respondent's vocational education * cohort				
No vocational education * cohort 1940				n.s.
No vocational education * cohort 1950				n.s.
No vocational education * cohort 1960				2.19
In training * cohort 1940				n.s.
In training * cohort 1950				n.s.
In training * cohort 1960				n.s.
Intercept	0.17	0.30	0.19	0.22
Pseudo-R ² (Nagelkerke)	14.1	16.5	28.3	29.0
Improvement of fit - Chi ² (comp. to previous model)	331.51	58.96	315.39	18.41
degrees of freedom (for added variables)	8	3	2	6

* defined as all vocational degrees (apprenticeship degree, full-time vocational school, technical college, advanced technical college, university)

Bold: significant at p < 0.05; **bold and italics:** significant at p<0.1 (controlled for missing categories)

n.s. = not significant

Source: Own calculations, German Life History Study, Max Planck Institute for Human Development, Berlin.

Table 5: Impact of school degree on not holding a vocational degree at age 25 - (binary logistic regressions, odds ratios: Exp(B))
(Risk group: all persons, not having foreign origin)

Respondent's school degree - 1 (Ref.: medium/higher level degree - Mittlere Reife/Abitur)	Cohort 1920	Cohort 1930	Cohorts 1940 - 1955			Cohorts 1960 - 1971			
<i>MEN</i>									
Lower degree (Hauptschule)	0.40	2.86	<i>1.39</i>			n.s. (1.31, p=.16)			
No formal school degree	n.s. (0.66, p=.48)	3.96	5.80			6.69			
Intercept	0.83	0.15	0.10			0.07			
Sample size: total/no vocational degree	559/169	349/95	1262/162			1811/142			
% of no vocational degree at age 25	30.2	27.2	12.8			7.8			
Improvement of fit - Chi ² (comparison to mean-model)	21.62	10.02	39.79			39.01			
degrees of freedom	2	2	3			3			
<i>WOMEN</i>									
Lower degree (Hauptschule)	2.85	5.94	2.38			3.32			
No formal school degree	2.18	10.95	6.32			5.67			
Intercept	0.67	0.46	0.21			0.07			
Sample size: total/no vocational degree	853/497	359/238	1208/310			1715/201			
% of no vocational degree at age 25	58.3	66.3	25.7			11.7			
Improvement of fit - Chi ² (comparison to mean-model)	46.49	44.69	68.64			78.61			
degrees of freedom	3	2	3			3			
<i>NET EFFECT OF GENDER DIFFERENCES (controlled for school degree)</i>									
cohort	1920	1930	1940	1950	1955	1960	1964	1971	
Gender (0=male/1=female)	3.29	6.03	4.72	3.12	1.70	1.85	1.92	1.50	

bold: significant at $p < 0.05$; **bold and italics:** significant at $p < 0.1$ (controlled for missing categories)

n.s. = not significant

Source: Own calculations, German Life History Study, Max Planck Institute for Human Development, Berlin,; for the 1964/1971-Kohorte: Study by Max Planck Institute for Human Development and the Institute for Employment Research (IAB)

Table 6a: Binary logistic regressions on holding only a lower school degree (Odds Ratios)
-- no school degree or only lowest degree (Hauptschule) --
(Risk group: all persons, not having foreign origin)

	Cohort 1920 <i>Exp(B)</i>	Cohort 1930 <i>Exp(B)</i>	Cohort 1940 <i>Exp(B)</i>	Cohort 1950 <i>Exp(B)</i>	Cohort 1955 <i>Exp(B)</i>	Cohort 1960 <i>Exp(B)</i>	Cohort 1964 <i>Exp(B)</i>	Cohort 1971 <i>Exp(B)</i>
Gender (0=male/1=female)	n.s.	n.s.	n.s.	n.s.	n.s.	0.66	0.49	0.59
Vocational education of father (holding a vocational degree*)								
no vocational degree*	3.76	3.69	1.94	n.s.	n.s.	<i>1.54</i>	n.s.	n.s.
Vocational education of mother (holding a vocational degree*)								
no vocational degree*	<i>1.36</i>	3.70	2.76	2.16	2.25	1.62	2.21	2.22
Occupational position of the head of the household (mostly father) (Ref.: qualified job)								
unskilled manual/low-skilled non-manual job	2.37	2.32	2.40	2.43	1.69	1.98	2.73	2.17
not employed	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	2.70	2.57
Family with 4 and more children (0=no, 1=yes)	2.19	1.77	n.s.	1.90	1.37	1.48	1.79	1.57
"Stressful family situation" (0=no/1=yes)	n.s.	n.s.	n.s.	n.s.	<i>1.67</i>	1.70	1.40	2.09
Intercept	n.s. (0.90)	n.s. (0.90)	1.31	n.s. (0.92)	0.49	0.45	0.35	0.27
Sample size: total/lower degree	1364/982	689/563	691/545	711/484	949/522	934/415	1219/469	1173/347
% of lower degree	0.72	0.82	0.79	0.68	0.55	0.44	0.38	0.30
Pseudo-R ² (Nagelkerke)	15.3	21.6	13.9	12.1	11.2	12.9	18.3	14.6
Improvement of fit - Chi ² (comparison to mean-model)	152.87	98.01	64.82	64.39	82.75	94.86	176.87	126.91
degrees of freedom	7	7	6	5	7	10	8	8

* defined as all vocational degrees (apprenticeship degree, full-time vocational school, technical college, advanced technical college, university)

bold: significant at $p < 0.05$; **bold and italics:** significant at $p < 0.1$ (controlled for missing categories)

n.s. = proved to be not significant in stepwise regression procedure (not included in model displayed)

Remark:

Schooling of parents has proved to be less discriminating than vocational education of parents.

Source: Own calculations, German Life History Study, Max Planck Institute for Human Development, Berlin,; for the 1964/1971-Kohorte: Study by Max Planck Institute for Human Development and the Institute for Employment Research (IAB)

Table 6b: Binary logistic regressions on holding only a lower school degree – MEN (Odds Ratios)
-- no school degree or only lowest degree (Hauptschule) --
(Risk group: all persons, not having foreign origin)

	Cohort 1920	Cohort 1930	Cohort 1940	Cohort 1950	Cohort 1955	Cohort 1960	Cohort 1964	Cohort 1971
	<i>Exp(B)</i>	<i>Exp(B)</i>	<i>Exp(B)</i>	<i>Exp(B)</i>	<i>Exp(B)</i>	<i>Exp(B)</i>	<i>Exp(B)</i>	<i>Exp(B)</i>
Vocational education of father (holding a vocational degree*)								
no vocational degree*	4.89	3.36	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Vocational education of mother (holding a vocational degree*)								
no vocational degree*	n.s.	3.99	3.95	1.68	2.44	1.70	1.99	2.54
Occupational position of the head of the household (mostly father) (Ref.: qualified job)								
unskilled manual/low-skilled non-manual job	1.79	2.11	3.22	2.40	1.67	2.16	2.01	1.93
not employed	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	2.75	2.80
Family with 4 and more children (0=no, 1=yes)	2.15	n.s.	n.s.	n.s.	n.s.	1.92	1.59	1.77
"Stressful family situation" (0=no/1=yes)	n.s.	2.00	n.s.	2.08	2.44	1.92	1.58	2.15
Intercept	n.s. (0.73)	n.s. (0.70)	n.s. (1.34)	n.s. (0.96)	0.50	0.43	0.39	0.26
Sample size: total/lower degree	542/400	340/280	352/281	351/226	497/273	485/237	636/284	633/216
% of lower degree	0.74	0.82	0.80	0.64	0.55	0.49	0.45	0.34
Pseudo-R ² (Nagelkerke)	14.4	27.0	16.0	9.0	12.9	4.3	13.2	10.4
Improvement of fit - Chi ² (comparison to mean-model)	56.26	60.86	37.74	23.86	50.27	5.89	65.77	69.72
degrees of freedom	5	8	4	5	6	7	8	7

* defined as all vocational degrees (apprenticeship degree, full-time vocational school, technical college, advanced technical college, university)

bold: significant at $p < 0.05$; **bold and italics:** significant at $p < 0.1$ (controlled for missing categories)

n.s. = proved to be not significant in stepwise regression procedure (not included in model displayed)

Remark:

Schooling of parents has proved to be less discriminating than vocational education of parents.

Source: Own calculations, German Life History Study, Max Planck Institute for Human Development, Berlin,; for the 1964/1971-Kohorte: Study by Max Planck Institute for Human Development and the Institute for Employment Research (IAB)

Table 6c: Binary logistic regressions on holding only a lower school degree – WOMEN (Odds Ratios)
-- no school degree or only lowest degree (Hauptschule) --
(Risk group: all persons, not having foreign origin)

	Cohort 1920	Cohort 1930	Cohort 1940	Cohort 1950	Cohort 1955	Cohort 1960	Cohort 1964	Cohort 1971
	<i>Exp(B)</i>	<i>Exp(B)</i>	<i>Exp(B)</i>	<i>Exp(B)</i>	<i>Exp(B)</i>	<i>Exp(B)</i>	<i>Exp(B)</i>	<i>Exp(B)</i>
Vocational education of father (holding a vocational degree*)								
no vocational degree*	3.46	4.84	2.20	n.s.	n.s.	1.94	n.s.	n.s.
Vocational education of mother (holding a vocational degree*)								
no vocational degree*	n.s.	2.64	2.17	2.97	1.99	n.s.	2.41	1.93
Occupational position of the head of the household (mostly father) (Ref.: qualified job)								
unskilled manual/low-skilled non-manual job	2.89	n.s.	2.09	2.59	1.70	2.14	3.87	2.69
not employed	1.63	n.s.	2.79	n.s.	3.70	n.s.	3.00	n.s.
Family with 4 and more children (0=no, 1=yes)	2.27	1.73	n.s.	2.03	1.69	1.50	2.22	n.s.
"Stressful family situation" (0=no/1=yes)	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	2.28
Intercept	n.s. (1.05)	n.s. (1.27)	n.s. (1.35)	n.s. (0.88)	0.55	0.39	0.16	0.18
Sample size	822/582	349/283	339/264	360/258	452/249	449/178	583/185	540/131
% of lower degree	0.71	0.81	0.78	0.72	0.55	0.40	0.32	0.24
Pseudo-R ² (Nagelkerke)	15.3	18.8	12.4	16.9	9.9	9.9	20.7	12.2
Improvement of fit - Ch ² (comparison to mean-model)	93.51	43.29	28.58	44.96	34.74	34.22	93.09	45.97
degrees of freedom	5	5	6	5	5	5	5	6

* defined as all vocational degrees (apprenticeship degree, full-time vocational school, technical college, advanced technical college, university)

bold: significant at $p < 0.05$; **bold and italics:** significant at $p < 0.1$ (controlled for missing categories)

n.s. = proved to be not significant in stepwise regression procedure (not included in model displayed)

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