

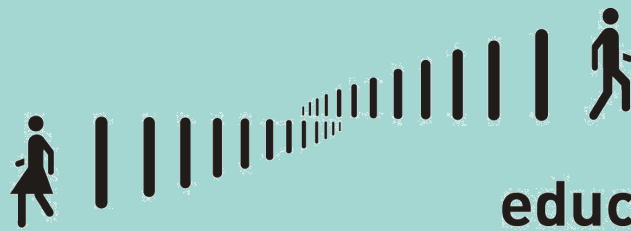
## Keynote I

### Educational Systems and Gendered School-to-Work Transitions

**Christian Imdorf**, Social Research and Methodology at the University of Basel, Switzerland

The paper summarizes the main findings of a research programme on how educational systems generate gendered school-to-work transitions. Gender segregation in education varies internationally and it is particularly evident in systems where vocational education and training is prominent; that is where students are under constraint to make major career choices early on. Depending on a country's educational policy, institutional logics contribute more or less to gender segregation in education and the labour market. Based on a sociologically informed understanding of education systems and gendered educational trajectories, the research programme contributes to international transition research. The paper advocates for international comparative case study methodology in order to benefit most from comparing rich international longitudinal data sets. Empirically, it relies on data of the Swiss youth panel study TREE as well as on various transition surveys in Germany, Norway, Canada and Bulgaria.

**Christian Imdorf** is a Privatdozent in Sociology at the University of Basel and an International Associate Member of the Institute for the Study of Societies and Knowledge at the Bulgarian Academy of Sciences. He held a SNSF (Swiss National Science Foundation) research professorship from 2011 to 2017 and has been a member of the TREE survey management team at the University of Bern. He has completed several international comparative research projects on school-to-work transitions. Currently he leads the Swiss research team within the H2020 project NEGOTIATE – Early job insecurity in Europe at the University of Basel. His current research interests focus on education systems and gendered school-to-work transitions from a comparative perspective, vocational pathways to higher education, specialized middle schools in Switzerland, school-to-work transitions in Bulgaria, discrimination in hiring, and the recruitment of young workers who have experienced employment insecurities. He is a member of various advisory boards, such as of the Swiss Observatory of Vocational Education & Training, the Laboratoire de l'Education of the Ecole Normale Supérieure de Lyon, and the Journal of Youth Studies. His most recent publications include “Do Vocational Pathways Improve Higher Education Access for Women and Men from Less Privileged Social Backgrounds? A Comparison of Vocational Tracks to Higher Education in France and Switzerland” in *Rassegna Italiana di Sociologia* (with M. Koomen, J. Murdoch and C. Guegnard) and “Transition systems and non-standard employment in early career: comparing Japan and Switzerland” in *Journal of Education and Work* (with L.A. Helbling and A. Inui). He has co-edited several books, amongst others “Gender segregation in vocational education” (with K. Hegna and L. Reisel) published by Emerald.



# educational systems and gendered school-to-work transitions

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*3rd International Conference on  
Transitions in Youth, Young Adulthood and Beyond  
29/30 September 2017, University of Bern*

## Gender Segregation in Education and Employment: The case of Switzerland

(Relatively) strong and stable gender segregation on Swiss labour market

Horizontal gender segregation...

- is linked to vertical gender segregation
- results in unequally distributed labour at the work place and  
*in the family*: Persistence of male breadwinner model (Levy 2013)
- results in unequal life chances for men and women in the life course

Role of the (welfare) state in Switzerland? Scientific discourse limited to  
social and labour market policies (Giraud & Lucas 2009)

How does the *educational system* mediate gender-typed educational  
trajectories and gender inequalities ? (Levy 1998)

## Horizontal gender differences at LM entry: Sex-typing of learned occupations by education (Swiss Census 2000, 18-35 year-olds)

Educational attainment	WOMEN		
	Male-dominated	Gender-integrated	Female-domin.
VET**	5.2%	49.7%	<b>45.2%</b>
UoAS / PET	6.4%	<b>69.7%</b>	23.9%
University	<b>20.0%</b>	64.1%	15.9%

Educational attainment	MEN		
	Male-dominated	Gender-integrated	Female-domin.
VET**	<b>63.4%</b>	30.3%	6.4%
UoAS / PET	<b>63.0%</b>	31.1%	5.9%
University	48.5%	<b>48.0%</b>	3.4%

\*\* ) Apprenticeship, fulltime VET-school, upper-secondary specialised schools

## Some previous research

How does the educational system affect gender relations in the educational system and in the labor market?

Charles & Buchmann (1994): Gender segregation in Switzerland due to

- institutional linkage of occupational segmented VET and labour market
- highly gendered adolescents' early occupational career decisions

School-to-work transition research gender-blind (Smyth 2005)

Research on gendered career orientation pays little attention to varying educational systems

Vocational education prone to (lasting) horizontal gender segregation  
(Estévez-Abe 2006; Niemeyer & Colley 2015; Reisel et al. 2015)

# Education system characteristics: opportunity structures for gender-typed career trajectories

- (1) **Occupational specificity** = opportunity structure for gender-stereotyped decision making
- (2) **Institutional timing of career choice**: different logics of gendered career choice during different biographical stages: childhood – adolescence – youth – early adulthood
- (3) **Permeability between and within** vocational and general **programs**  
Institutional opportunities to quit gender-typed pathways
- (4) **Institutional linkage** between educational programs and jobs transfer  
gender segregation from education to employment

## Hypotheses (Imdorf et al. 2014)

- (a) The **more vocationally stratified** an educational system
- (b) The **earlier** students **have to chose** (vocational) programmes
- (c) The **less re-choice options** the educational system offers
- (d) The **stronger** the **education-employment linkage**
  - >> the **more gender-typed** are educational **transitions** into the labour market
  - >> the more gender-segregated the labour market (at LM entry)

**Methodology:** Cantonal comparison & international case studies

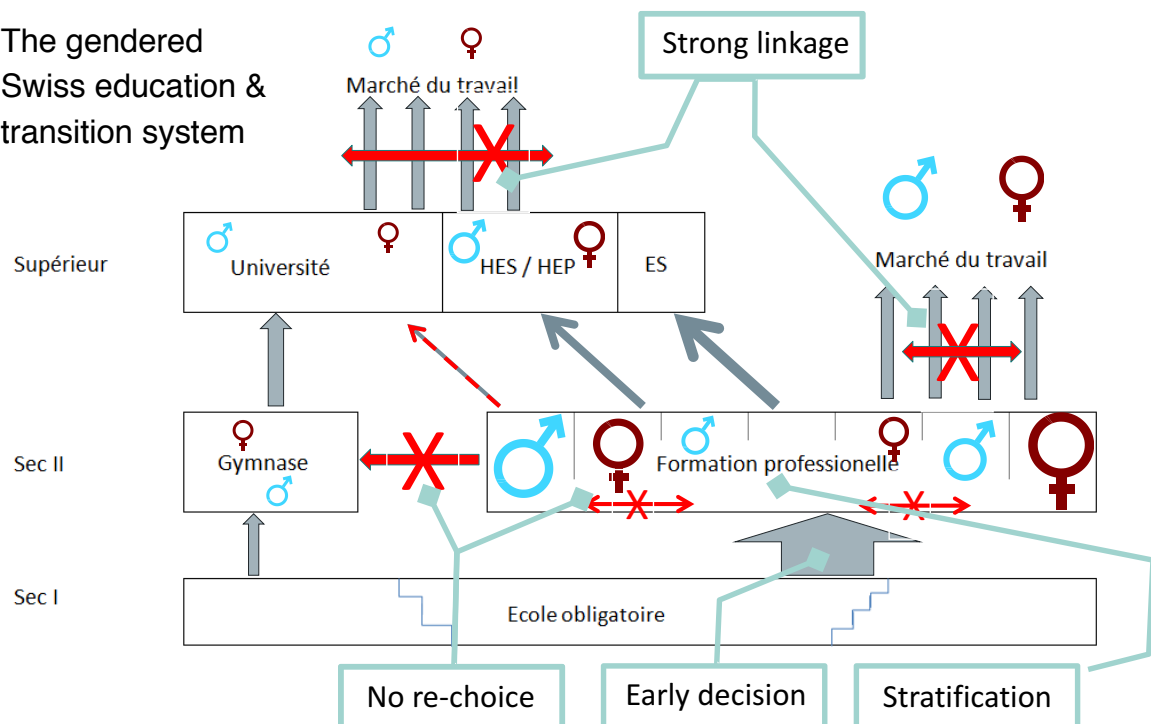
# Plan



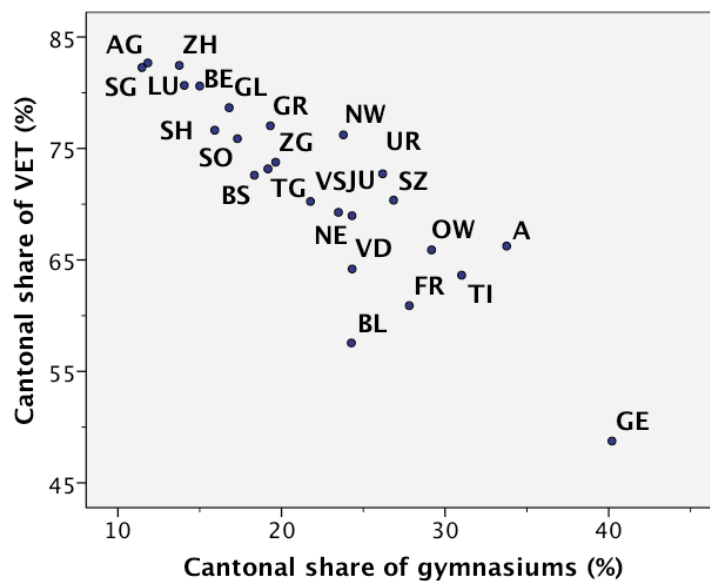
- 1 How cantonal educational systems foster gender-typed school-to-work (S2W) transitions
- 2 Educational systems and gender segregation form an international comparative perspective
- 3 Permeability of education and gender segregation
- 4 Transferring gender segregation from education to employment: The role of education – employment linkage
- 5 Epilog: Doing international comparative S2W transition research

## 1 How cantonal educational systems foster gender-typed school-to-work transitions (Imdorf et al. 2014)

The gendered Swiss education & transition system



## 26 (gendered) cantonal education systems



Hypothesis: Gender-typed S2W-transitions are more pronounced in cantons where VET offers are more frequent

## Reconstructing S2W transition types in Switzerland

Data: TREE longitudinal study (2000 – 2010)

Starting point: PISA 2000 subsample (N=6343)

8 survey panels: 2001-07 yearly, plus 2010

Subsample: Grade 9 in 2000, 15 to 17 year- olds: N= 6074 (t0)

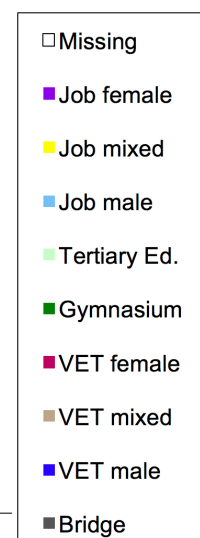
**TREE**

Reconstructing S2W-transition types, by gender:

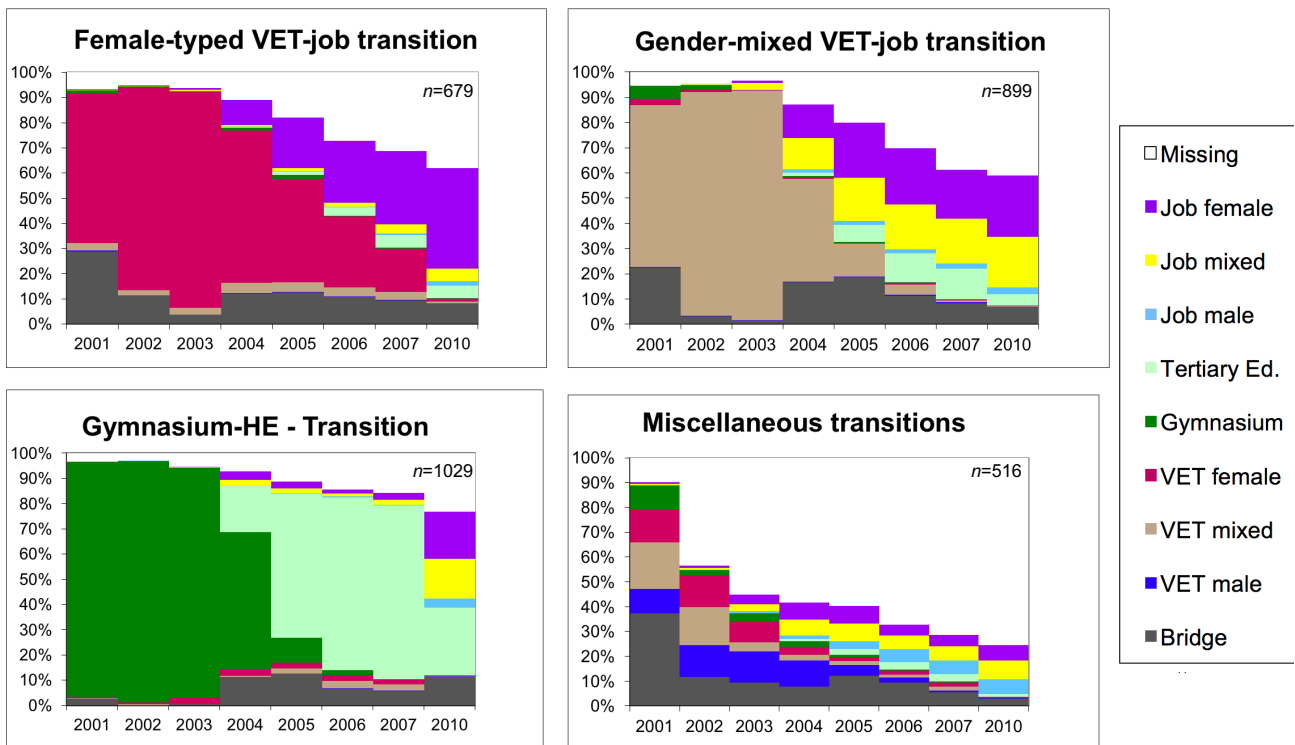
*Optimal Matching Analysis*

4 transition types per gender group:

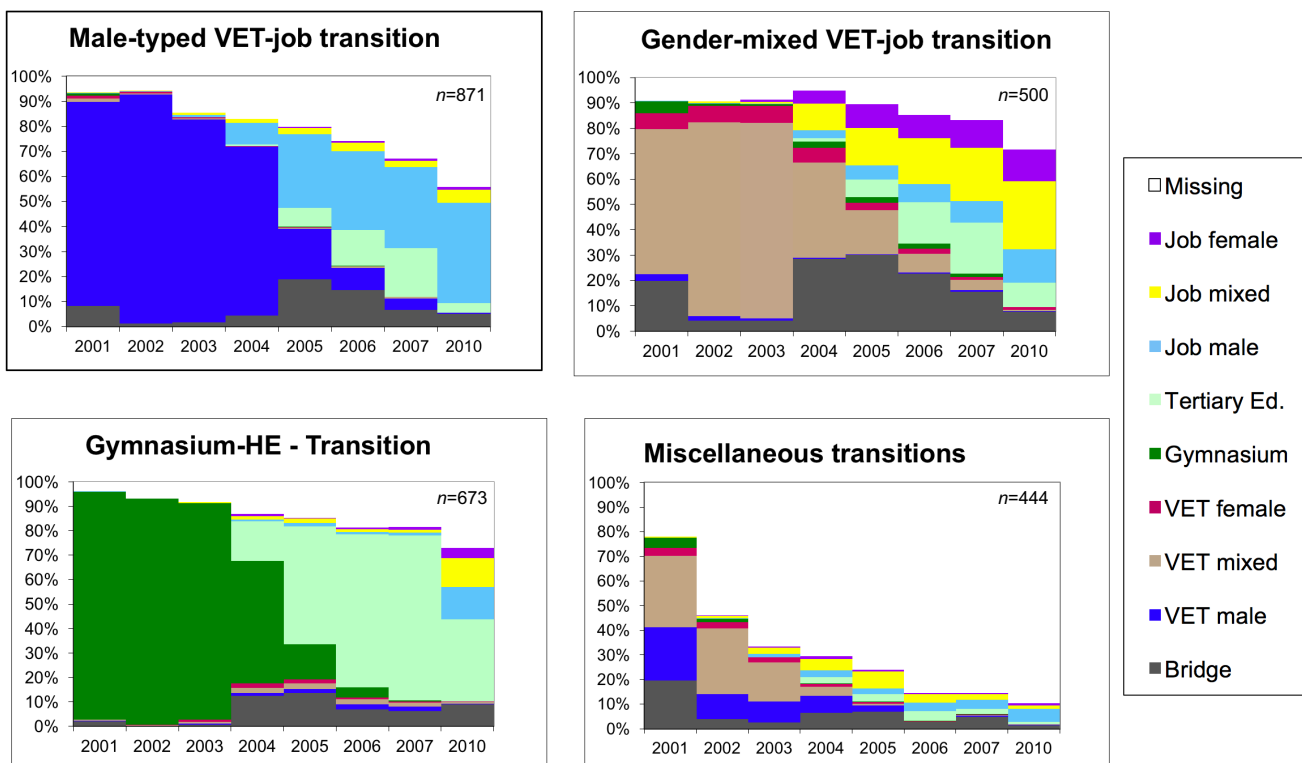
- Female-typed VET-job transition (women only)
- Male-typed VET-job transition (men only)
- Gender-mixed VET-job transition (women & men)
- Gymnasium-HE - Transition (women & men)
- Miscellaneous transitions (women & men)



## Four S2W transition types: **Women**

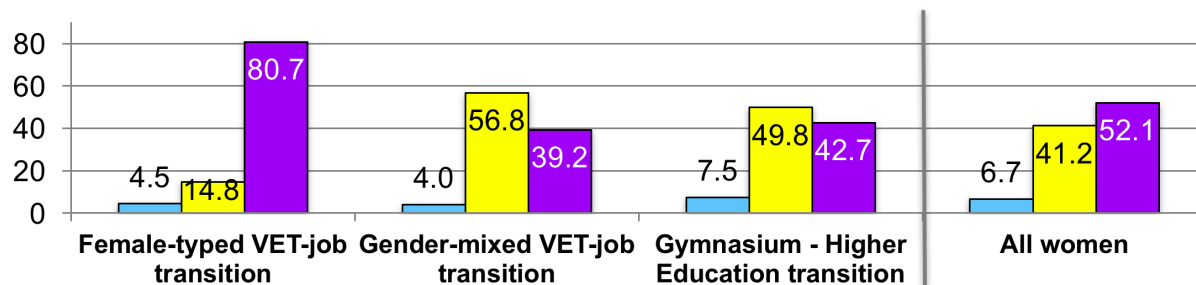


## Four S2W- transition types: **Men**

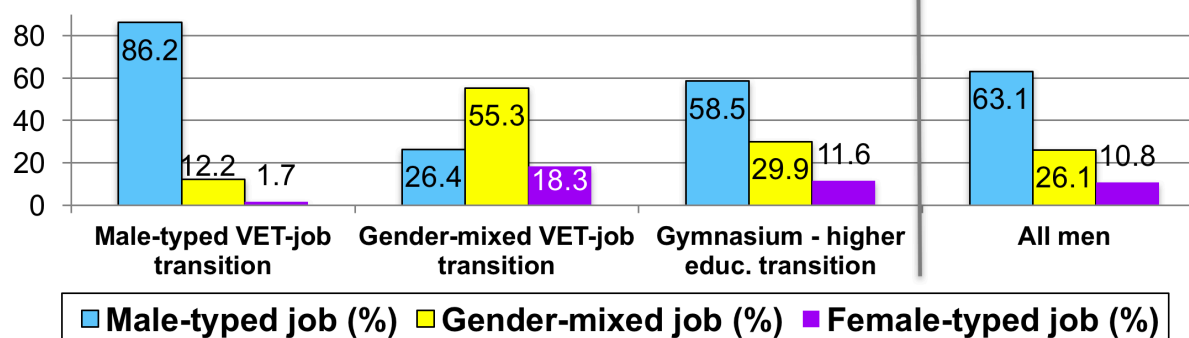


# Labour market gender segregation by transition type and gender

## WOMEN



## MEN



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## Predicted transition type probabilities for average or good students, by cantonal shares of VET (in %)

Transition type	Cantonal share of VET (in %)			
	0.5	0.6	0.7	0.8
<b>Women</b>				
Female-typed VET-job transition	12.5	14.2	15.6	16.5
Mixed VET-job transition	14.9	20.1	25.9	32.1
Gymnasium-higher educ. transition	62.5	53.1	43.4	34.0
Miscellaneous transition	10.0	12.6	15.1	17.5
Total	100.0	100.0	100.0	100.0
<b>Men</b>				
Male-typed VET-job transition	13.2	19.2	26.9	36.1
Gender-mixed VET-job transition	22.2	22.4	21.8	20.4
Gymnasium-higher educ. transition	51.5	44.9	37.8	30.5
Miscellaneous transition	13.0	13.5	13.5	13.0
Total	100.0	100.0	100.0	100.0

Note: weighted estimates based on the design weight, cf. Sacchi (2011).

Source: TREE, Data Release 2011.

(Imdorf et al. 2014: 189)



## 2 Educational systems and gender segregation in education: international comparison (Imdorf et al. 2015)

*How do institutional settings and their embedded policy principles affect gender-typed enrolment in educational programmes ?*

Normative principles – how education should be organised (Verdier 2013):

ACADEMIC principle (general skill development)

VOCATIONAL principle (*Berufsprinzip*: Merit based on vocation)

UNIVERSALISTIC principle (openness, inclusiveness, permeability)

VOCATIONAL: VET offers opportunities for gendered choices

ACADEMIC vs. VOCATIONAL: Different timing of career choice matters for gendered choices

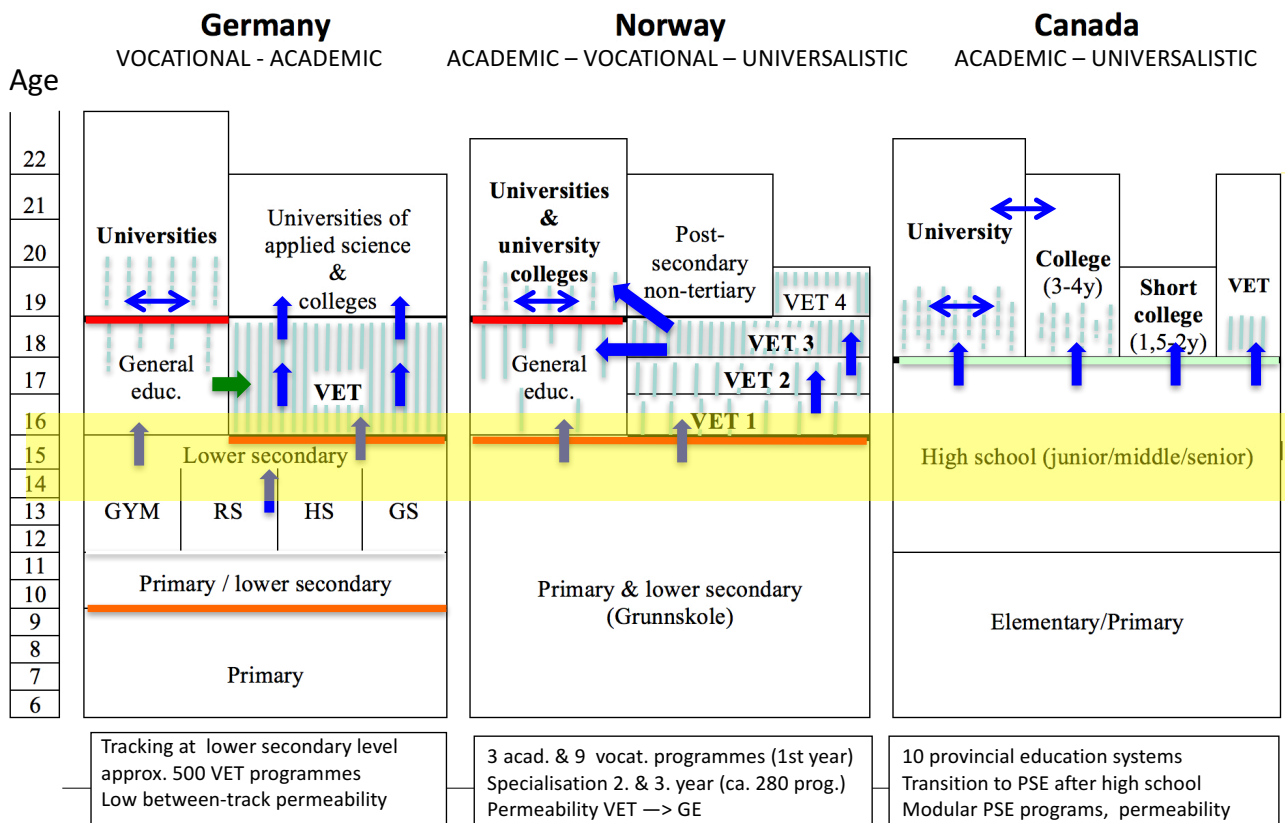
UNIVERSALISTIC: Permeability & de-gendering of educational choices

### Three countries with different mix of educational policy principles: Canada, Norway, Germany

Country	VOCATIONAL Upper secondary enrolment (%)*			ACADEMIC / UNIVERSAL		
	GE	VET	Apprenticeship system	Tertiary enrolment (%)	Tracking	Permeability (VET to GE)
Canada	84.8	15.2	<i>weak, late</i>	<i>na</i>	+	+++
Norway	42.4	57.6	<i>moderate, delayed</i>	68%	++	++
Germany	36.7	63.3	<i>strong, early</i>	46%	+++	+

\*) OECD (2003), p. 271: Upper secondary enrolment patterns in 2001

# Education systems of DE, NO & CA compared



## Research challenges and design

- Different educational systems
  - >> different national classification systems of education
  - >> Different measurements in surveys (e.g. VET programme)
- Case study approach (3 country cases)
- Test for vocational effect on gendered transitions in each country separately; draw conclusions on *theoretical* level

*Assumptions: Upper secondary and tertiary (CA: post-secondary) programmes more gender-typed (a) the more 'vocationalised' they are, and (b) the earlier students decide between them*

# Youth survey data compared

	Germany	Norway	Canada
Survey	BIBB Transition Survey 2006	Young in Norway Longitudinal	Youth in Transition Survey
Design	Cross-sectional (retrospective)	Longitudinal (prospective)	Longitudinal (prospective)
Data collection	2006	1992, 1994, 1999 (2005)	1999, 2000, 2002, 2004, (2006, 2008)
N (analytical)	4'465 (weighted)	3'844 (minimized panel mortality)	16'404 (weighted)
Cohorts	Born in 1982-88 (mean: 1985)	Mean year of birth 1977	Born in 1985
Upper / post-secondary enrolment	Late 1990s to mid-2000s	1990s	First half of the 2000s

## Factors related with gender-typed programme Six multinomial logistic regression models

(Ref. category: mixed gender programme)

	Germany		Norway		Canada	
DV: Gender-typed educational programme (ref. gender- mixed)	Men	Women	Men	Women	Men	Women
<b>Upper sec. / post-secondary</b>						
Vocational programme	(P)	P	P	P	P	P
Workplace experience	P	N	--	--	P	P
University programme	N	N		P	N	P
<b>Lower secondary schooling</b>						
Maths grade	P	N	--	--	(P)	N
Language grade	N		--	--	N	v
Average grade points	--	--	(N)	(N)	--	--
Reading literacy	--	--	--	--	N	^
Higher track level	N	N	--	--	--	--
<b>Control variables</b>						
Age at start of programme	N	N	N	P	--	--
SES high (ref. low)	N	N	N	N	N	N
Rural area (ref. urban)			(P)	(P)	P	P
East Germany (New Laender)	P		--	--	--	--
<i>Nagelkerke</i>	0.24	0.18	0.34	0.13	0.12	0.12
<i>N</i>	3654		2023		14078	

P: positive effect (p<0.05) // N: negative effect (p<0.05) // v ^ : non-linear effect // -- : variable na

## Some insights from the international comparison

Findings are most robust for *men*:

- Especially *men* can escape gender-typed programmes through university / post secondary education
- The older the *men*, the less gender-typed the programme (DE, NO)
- Norway: Permeability VET > Universities allows for de-gendering trajectories, especially for *men*

→ A country's educational system sets the institutional age of career decision. The earlier & the more vocational the educational offers, the more gendered are the trajectories

→ Importance of social class to understand gender-typed careers

## 3 Permeability of education and gender segregation

Permeability in educational systems may reduce horizontal gender segregation: some evidence from Norway (Imdorf et al. 2015)

Do transitions from (gender-typed) VET to HE allow for educational *de-gendering* ? Compare Bulgaria and Switzerland.

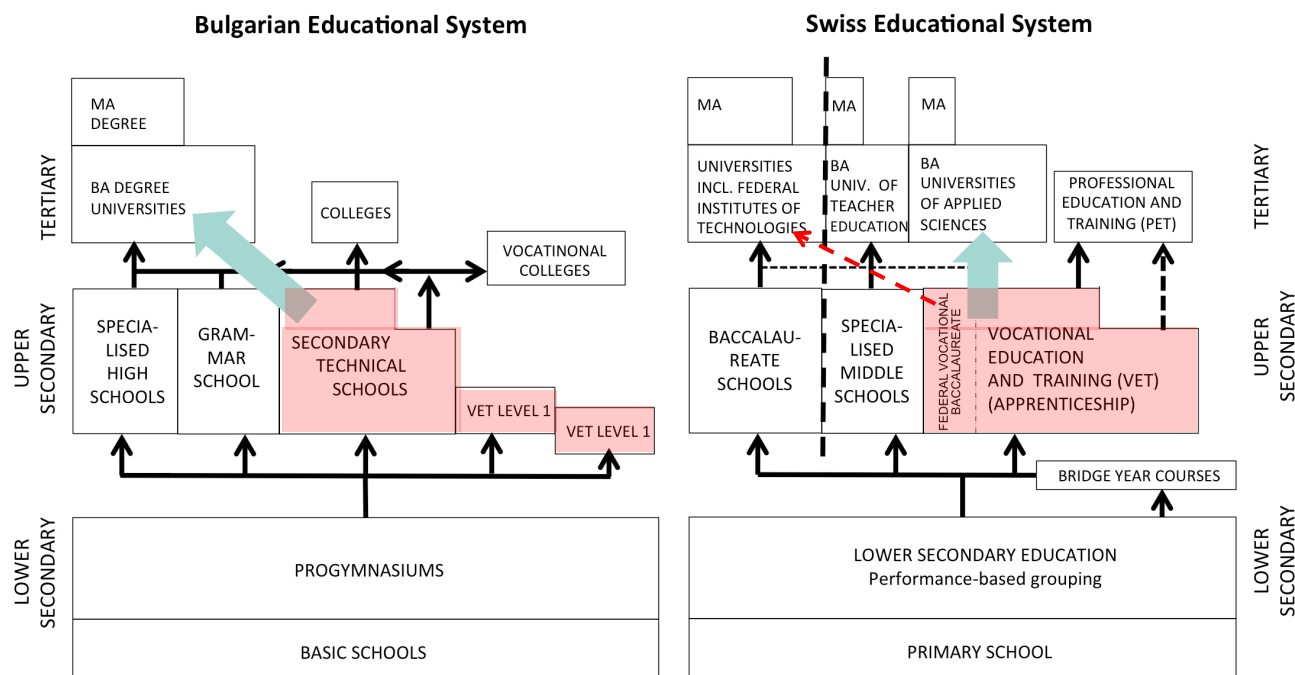
### Bulgaria

- Strong gender segregation in IVET (Ilieva-Trichkova et al. 2015)
- Relatively low gender segregation in HE (Charles & Bradley 2009)
- *IVET graduates can access HE*

### Switzerland

- Strong gender segregation in IVET (Leemann & Keck 2005)
- Less gender segregation at universities, but relatively high at universities of applied sciences (Franzen et al. 2004; Leemann & Keck 2005)
- *Limited access for IVET graduates to universities*

# Permeability VET/HE: Bulgaria vs. Switzerland



(Imdorf et al., under review)

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## Data

### Swiss Youth Panel Survey **TRÆ**

- Nationally representative longitudinal survey
- Pop.: students who left 9<sup>th</sup> grade in 2000
- Follow-ups 2001-2007 (yearly), 2010
- 6343 respondents (t1); analysed sample N=3507
- *Prospective* information on educational transitions

### Bulgarian School Leaver Survey 2014

- Nationally representative sample (two-stage cluster sampling)
- Pop.: individuals 15-35y who left formal education no less than 1 year and no more than 5 years preceding the survey
- 2103 respondents; analysed sample N=1642
- *Retrospective* information on educational transitions



BULGARIAN-SWISS COOPERATION PROGRAMME  
БЪЛГАРО-ШВЕЙЦАРСКА ПРОГРАМА ЗА СЪТРУДНИЧЕСТВО

## Gender concentration in education in BG and CH (ISCED97 3-digit)

	BG	CH
<b>Vocational education</b>		
Women with female-typed degrees	39%	25%
Men with male-typed degrees	70%	54%
<b>Higher College / University of Appl. Science</b>		
Women with female-typed degrees	31%	39%
Men with male-typed degrees	26%	47%
<b>University</b>		
Women with female-typed degrees	32%	23%
Men with male-typed degrees	13%	23%

(Imdorf et al., under review)

## VET-diploma holders only: Gender-type of highest educational degree, by country and gender\*

<i>Dependent variable:</i> <i>Gender-typed</i> <i>educational degree</i>	Switzerland		Bulgaria	
	Men	Women	Men	Women
	$dF/dx$	$dF/dx$	$dF/dx$	$dF/dx$
<b>Higher education degree</b>	0.11	0.17 **	-0.48 **	-0.08
Parental education	-0.01	0.02	0.06	-0.16 +
Geography (rural)	0.08	0.05	0.12 +	-0.08
Western Switzerland	0.08	-0.07		
CH: Low school track	0.16 **	0.03		
CH: Low reading skills	0.05	0.07		
BG: Low language grades			0.09	-0.17
N	942	1067	265	222
Wald chi2	14.76 *	10.31	33.80 **	6.18

\*) Probit regressions, AMEs, weighted estimates

(Imdorf et al., under review)

## 4 Transferring gender segregation from education to employment: education – employment linkage

German-speaking countries:

- Vocational principle (*Berufsprinzip*) links education to employment
- & transfers horizontal gender segregation from education to work (Solga & Konietzka 2000; Trappe 2006)

Yet another comparison of Bulgaria vs. Switzerland:

More pronounced *vocational principle* in Switzerland compared to Bulgaria – *does it affect gender segregation in the labour market?*

(...)\*

Stronger *educational gender segregation* – especially in VET – in combination with *stronger linkage* in Switzerland may explain increased *occupational gender segregation* compared to Bulgaria (Heiniger & Imdorf 2017)

\*) Paper presentation at this conference in Parallel Session 3C

## How institutional dimensions matter for gendered school-to-work transitions

*Occupational specificity / vocational stratification*

- Vocational offers foster gender segregation (CH, DE, NO, CA, BG)
- Why? Stronger technical-social divide of VET compared to GE/HE ?
- VET & equal opportunity: Social inclusion at the cost of gender equality

*Institutional timing of career choice*

- A region's / country's educational system sets the institutional age of career decision: The earlier, the more gendered (CH, DE, NO, CA)

*Permeability between VET and HE (re-choice options)*

- University studies allow for de-gendering educ. trajectories (NO, BG)

*Education – employment linkage*

- Strong linkage translates gender segregation from education to work (CH)

> Theoretical assumptions hold mainly for *men*

> Institutionally framed intersectionalities of age, gender, and social class

# Understanding the Swiss case

- Institutional constraints for early career decisions and high occupational specificity of upper secondary education result in pronounced gender-typical VET - job transitions
- Lack of institutional opportunities to escape gender-typed educational trajectories
- Strong education - employment linkage at labour market entry perpetuates gender segregation in the labour market
- > The design of the Swiss educational system and its underlying strong normative (vocational) principle (partly) explains horizontal gender-segregation on the Swiss labour market

## 5 Epilog: Doing international comparative transition research

- International surveys vs. international case studies
- S2W panel surveys represent national structures of education and employment (e.g. Moulin 2010). Pooling data not always advisable
- Doing international case studies:
  - = taking national contexts of education and work serious
  - = collaborating with international experts
- Necessary resources : accessible (longitudinal) data, networks, (some kind of) reputation, mobility experience, patience, assistance, time and money
- **Use this conference to get in touch, and to look ahead !!**



## Numberless credits go to ...

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**Thank you**  
for your attention.

More on *<http://esgt.unibas.ch>*



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