



## **Intergenerational transmission of social capital**

A first look into PISA-L dataset

**Arnošt Veselý**  
The Institute of Sociology Academy  
of Sciences of the Czech Republic

RC28 Spring Meeting  
Brno, the Czech Republic  
May 24-27, 2007

### **Presentation structure**

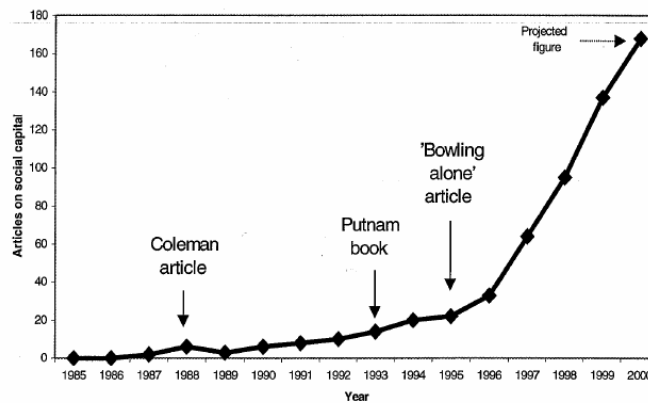
1. Rationale of research;
2. Social capital research and its shortcomings;
3. Basic research questions;
4. Theory and hypotheses;
5. Data;
6. Results;
7. Preliminary conclusions and further steps.

## Why this topic?

Social capital can generate a lot of positive outcomes both for the individual and the community, it is supposed to:

- facilitate educational attainment;
- facilitate job search;
- lead to better health;
- lead to higher life satisfaction;
- contribute to lower levels of crime
- ...

## Social capital is fashionable ...



Source : Halpern (2001)

## ...but ambiguous concept

	Definition	Purpose	Analysis
<b>Bourdieu</b>	Resources that provide access to group goods	To secure economic capital	Individuals in class competition
<b>Coleman</b>	Aspects of social structure that actors can use as resources to achieve their interests	To secure human capital	Individuals in family and community settings
<b>Putnam</b>	Trust, norms and networks that facilitate cooperation for mutual benefit	To secure effective democracy and economy	Regions in national settings

Source: Winter 2000

## Competing definitions

- [Social capital] is the sum of the resources, actual or virtual, that accrue to an individual or a group by virtue of possessing a durable network of more or less institutionalized relationships of mutual acquaintance and recognition (Bourdieu 1992) = „**connections**“
- “...features of social life - **networks, norms, and trust** - that enable participants to act together more effectively to pursue shared objectives... Social capital, in short, refers to social connections and the attendant norms and trust” (Putnam, 1995).
- “**networks** together with shared norms, values and understandings that facilitate co-operation within or among groups” (OECD, 2001).

## ... and competing measurement

- Generalized trust
- Informal trust
- Institutional trust
- Participation in social activities
- Membership of clubs, organizations, or associations
- Active involvement in clubs, organizations, or associations
- Civic participation
- Perception of reciprocity in the community
- Donating time or money
- Voting
- Nature of informal networks – family and friends
- Useful social connections
- Density of formal networks
- .....

## Key open questions

- Is there really only one type of social capital, or are there different types of independent or even competing social capitals?
- If there is more than type of social capital, how these different types are interlinked?
- How and through which channels is social capital actually created?
- How stable is social capital over time?

## Little we know ...

... because most SC studies:

- use single social capital indicator (instead of multiple SC measures) and do not analyze SC types interrelationships;
- are based upon cross-sectional research design (instead of longitudinal or multi-generational design);
- focus upon adults (instead of youths);
- use mostly data from USA or other established democracies.

## To overcome it, we ...

- focus upon early development of social capital of youths;
- utilize multi-generational (children and parents) and longitudinal research design;
- use several measures of social capital;
- use data from the Czech Republic.

## Basic questions

### Descriptive

- What is correlation between different indicators (types) of social capital?
- To what extent is social capital transmitted from one generation into another? Is the extent of social capital transmission different for different types of social capital at stake?
- How stable is social capital over time?

### Exploratory

- What are the strongest determinants of social capital of youths?
- Through which channels and mechanisms is social capital transmitted between generations?
- Are there different mechanisms of this transmission for different types of social capital at stake?

## Theoretical inspirations

Because very few studies on transmission of social capital, we draw upon:

- Social capital theories (determinants and predictors of SC – trust and participation);
- Political socialization research;
- Youth research (leisure and extra-curricular activities).

# Theory

Competing concepts:

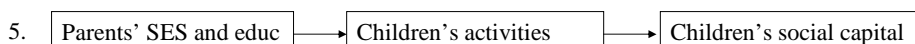
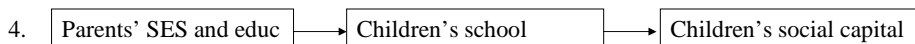
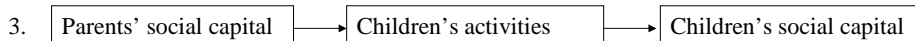
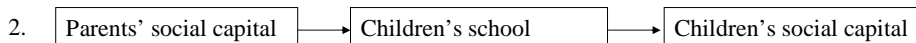
- **Direct transmission** from parents to their children during socialization: the attitudes of the parents shape the attitudes of the children (Stolle and Hooghe 2004)
- **Indirect transmission** through:
  - socioeconomic status and cultural capital (Nie et al. 1996);
  - education and school climate (Torney-Purta 2003)
  - social activities of children (McNeal 1998)
- **Combination of factors** (model)

## Theoretical models

### DIRECT TRANSMISSION

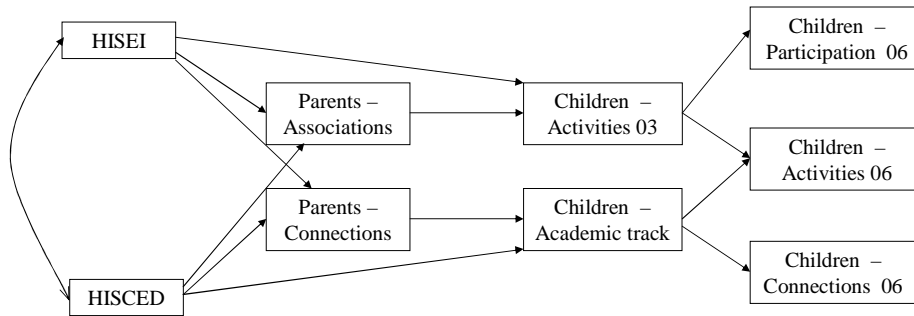


### INDIRECT TRANSMISSION



# Theoretical models

## COMBINATION



# Hypotheses

- H1: There is low correlation between different measures of social capital.
- H2: There is high level of direct intergenerational transmission of social capital
- H3: The best predictor of children's social capital is parents' SES and education.



## Data

- PISA-L = longitudinal extension of OECD project Programme for International Student Assessment (PISA)
- Fifteen and sixteen year-old Czechs (2003)
- Four questionnaires merged into one dataset:

May 2003:

- Students - International PISA (N=6320)
- Students - PISA-L supplement, Czech Republic only), (N=6320)
- Parents - PISA-L supplement (N=4185)

Dec 2006-April 2007:

- Students - PISA-L (N= 1260)

## Four measures of social capital

### **TRUST**

- generalized trust of children;
- generalized trust of parents.

### **EXTRACURRICULAR ACTIVITIES OF CHILDREN**

- sports, sports;
- language courses;
- art and music clubs;
- scout, tourist clubs.

### **CIVIC PARTICIPATION**

- parents' associational activities;
- children's civic participation.

### **SOCIAL NETWORKS (USEFUL SOCIAL CONNECTIONS)**

- social networks of parents;
- social networks of children.

## Social trust

Generally speaking, would you say that most people can be trusted, or that one needs to be very careful in dealing with people?

- a) Most people can be trusted
- b) One needs to be very careful in dealing with people

## Civic Participation – parents

How often do you engage in following activities: associational activities, attending meetings of various clubs, political parties etc.?

- 1. Daily
  - 2. Several times a week
  - 3. At least once per a week
  - 4. Several times a month
  - 5. Less often
  - 6. Never
- Recorded: 1 through 5 = 1 (yes), 6 = 0 (no activities)

## Civic Participation – children

From the list of voluntary non-profit organizations please choose those you are a member of, or for which you have volunteered during the last twelve months:

- a) cultural organization (singing choirs, dancing or musical choruses, historic building protection);
- b) organization for the protection of environment or animal rights;
- c) political organization (party, club, movement, association ...);
- d) organizations dealing with humanitarian help, human rights, minorities or migrants;
- e) organizations providing health or social services (e.g. for the old or handicapped people).

Composite index (CH2\_particip\_I2):  $a + b + c + d + e$

Binary outcome (CH2\_particip\_I3): at least one organization

## Extra-curriculum activities

This school year, do you attend:

- a) sport group?
- b) language course?
- c) other hobby group (music or art circle, art school, modelers' club etc.) ?
- d) other club or group (Scout, tourist group, church group etc.) ?

1 = I do not attend, 2 = Attend once a week, 3 = Attend more than once a week

Composite index (SocActi03):  $a + b + c + d$

Binary (SocActi06D): at least one activity

## Social Connections

A.) How often do other people (relatives, friends) turn to you or to other family member to help them solve some problems or to arrange anything by applying your influence for their benefit? (1 – Never, 2 – Seldom, 3 – Occasionally, 4 – Quite often, 5 – Very often)

B) When you are in a difficult situation or you need to arrange anything, do you think there are people you can ask to intervene on your behalf and to help you? (1 – No, nobody, 2 – Only a few, 3 – Quite a lot, 4 – Many, 5 – Very many)

C) How important role do these useful contacts play in your life? (1 – Essential, 2 – Very important, 3 – Fairly important, 4 – Not very important, 5 – Not important at all)

Composite index: A+B+C

Binary: 3 thru 6=0; 7 thru 15=1; meaning: at least once are connections important

## Summary of SC measures

	Parents 2003	Children 2003	Children 2006
<b>Trust</b>	X	X	X
<b>Associational activities</b>	X		X
<b>Extra-curricular activities</b>		X	X
<b>Social networks</b>	X		X

## Other measures

### **Family background**

- Highest education in family (PISA index)
- Highest ISEI in family (PISA index)

### **School**

- Attendance of academic track (in contrast to vocational)

### **Controls**

- Sex
- Size of town

## Methodology

Because of the little prior knowledge:

- First step – univariate and bivariate analysis of social capital measures;
- Second step – series of regressions
  - Dependent variable: four types of youths' social capital of youths in 2006
  - Independent variables: parents' SES and education, attendance of academic track
  - Controls: gender, size of town.
- Third step – structural equation model

# Results

Variable	Questionnaire	Coding	N	Min	Max	Mean	SD
<b>Trust</b>							
Social trust – parents 2003	P 2003	0 = people can not be trusted, 1 = people can be trusted	1201	0	1	.25	.43
Social trust – children 2003	PISA-L 2003	ditto	1244	0	1	.26	.44
Social trust – children 2006	PISA-L 2006	ditto	1257	0	1	.22	.42
<b>Associational activities</b>							
Associational activities – parents	P 2003	0 = no, 1 = yes	1216	0	1	.40	.49
Associational activities – children	PISA-L 2006		1224	0	7	.71	1.14
Associational activities – children	PISA-L 2006	0 = no, 1 = yes	1224	0	1	.36	.48
<b>Extracurricular activities</b>							
Social activities of children 2003 – sum index	PISA-L 2003	0 = no activities, 12 = most activities	1142	4	12	5.54	1.44
Social activities of children 2006 – sum index	PISA-L 2006	ditto	1183	4	12	5.16	1.31
Social activities of children 2003 – dichotomy	PISA-L 2003	0=no activities; 1=at least one activity	1142	0	1	.67	.47
Social activities of children 2006 – dichotomy	PISA-L 2006	ditto	1183	0	1	.57	.5
<b>Social connections</b>							
Social connections of parents index - parents	P 2003	3 = no connections, 15 = most possible social connections	1211	3	15	7.47	1.97
Social connections of parents index - children	PISA-L 2006	ditto	1255	3	15	7.68	2.06
Social connections of children index – dichotomy	PISA-L 2006	0=connections not important	1255	0	1	.71	.46
<b>Family background</b>							
Highest education in family (PISA index)	PISA 2003	0 = none education, 6 = ISCED 5A,6	1252	1	6	4.58	1.15
Highest ISEI in family (PISA index)	PISA 2003	16 = lowest ISEI, 90 = highest ISEI	1250	16	90	54.21	14.7
<b>School</b>							
Type of school	PISA-L 2003	1=attended vocational school, 2= do not attended vocational school	979	1	2	1.84	.36
<b>Controls</b>							
Sex	PISA 2003	0=Female, 1=Male	1260	0	1	.39	.49
Location	PISA-L 2003	0=less than 25 000 inhabitants, 1= more than 25 000 inhabitants	1252	0	1	.38	.49

# Results

## Correlations

	1.	2.	3.	4.	5.	6.	7.	8.	9.
<b>1. Trust – parents 2003</b>	1.00								
<b>2. Trust – children 2003</b>	.10**	1.00							
<b>3. Trust – children 2006</b>	.18**	.23**	1.00						
<b>4. Associational activities – parents</b>	.07*	-.02	.01	1.00					
<b>5. Associational activities – children</b>	.01	-.04	-.03	.10**	1.00				
<b>6. Activities of children 2003 – sum index</b>	.05*	.02	.05	.05*	.21**	1.00			
<b>7. Activities of children 2006 – sum index</b>	.03	-.01	.05	.05	.28**	.38**	1.00		
<b>8. Social connections – parents 2003</b>	.03	-.03	.03	.12**	.04	.00	.02	1.00	
<b>9. Social connections – children 2006</b>	-.03	-.03	.01	.02	.06**	.00	.06*	.20**	1.00

Note: Entries are Kendall's tau\_b correlation coefficients.

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

## Results – predictors of participation

	0		1		2		3		4		5		6		7		8	
	B	p	B	p	B	p	B	p	B	p	B	p	B	p	B	p	B	p
zhisei			,13	,12													,01	,48
zhisced			,09	,27													-,02	,85
CH-Activ_03					,58	,00			,39	,00							,24	,00
CH-Activ_06							,68	,00	,51	,00							,41	,00
P-Connections											,11	,09					,35	,03
P-Assoc													,45	,00			,02	,94
Academic track															,29	,17	,01	,48
sex	-,69	,00	-,71	,00	-,76	,00	-,80	,00	-,82	,00	-,71	,00	-,74	,00	-,59	,00	-,74	,00
town	,03	,79	-,10	,44	-,18	,20	-,08	,57	-,19	,20	,00	,98	,06	,65	-,10	,48	-,38	,03
Constant	-,31	,00	-,34	,00	-,37	,00	-,29	,00	-,34	,00	-,26	,00	-,47	,00	-,83	,04	-,06	,00
N	1216		1200		1106		1158		1059		1171		1175		952		800	
df	2		4		3		3		4		3		3		3		8	
P	,000		,000		,000		,000		,000		,000		,000		,000		,000	
R <sup>2</sup> Nagelkerke	,034		,046		,129		,149		,179		,039		,051		,032		,193	

## Predictors of extra-curriculum activities

	0		1		2		3		4		5		6	
	B	p	B	p	B	p	B	p	B	p	B	p	B	p
zhisei			,01	,16									,05	,64
zhisced			,22	,00									,09	,41
CH-Activ_03					,94	,00							1,00	,00
P-Connections							,04	,52					-,02	,78
P-Assoc									,16	,20			,07	,67
Academic track											,77	,00	,34	,18
sex	,09	,45	,09	,45	,10	,44	,13	,31	,12	,35	,07	,60	,14	,42
town	,33	,01	,16	,20	,07	,60	,34	,01	,38	,00	,39	,01	,07	,69
Constant	,11	,19	-,127	,00	,09	,37	,13	,14	,04	,70	-,135	,00	-,63	,20
N	1175		1160		1174		1123		1139		926		804	
df	2		4		3		3		3		3		8	
P	,018		,000		,000		,026		,009		,000		,00	
R <sup>2</sup> Nagelkerke	,009		,044		,201		,011		,014		,038		,258	

## Predictors of social connections

	0		1		2		3		4		5		6		7	
	B	p	B	p	B	p	B	p	B	p	B	p	B	p	B	p
zhisei			-.03	,73											-.09	,39
zhisced			-.02	,79											-.11	,32
CH-Activ_03					,04	,50									,07	,49
CH-Activ_06							,18	,01							,22	,02
P-Connections									,53	,00					,66	,00
P-Assoc											,22	,09			,03	,87
Academic track													-.47	,03	-.60	,03
sex	-.10	,44	-.11	,40	-.13	,34	-.11	,42	-.05	,69	-.09	,51	-.13	,39	-.14	,42
town	,10	,44	,13	,34	,01	,93	,08	,55	,01	,95	,11	,42	,06	,68	-.03	,87
Constant	,90	,00	,90	,00	,91	,00	,90	,00	,96	,00	,78	,00	1,76	,00	2,15	,00
N	1247		1231		1133		1170		1200		1205		969		801	
df	2		4		3		3		3		3		3		9	
P	,562		,759		,698		,038		,000		,284		,166		,000	
R <sup>2</sup> Nagelkerke	,001		,002		,002		0,01		,065		,004		,007		,116	

## Preliminary conclusions

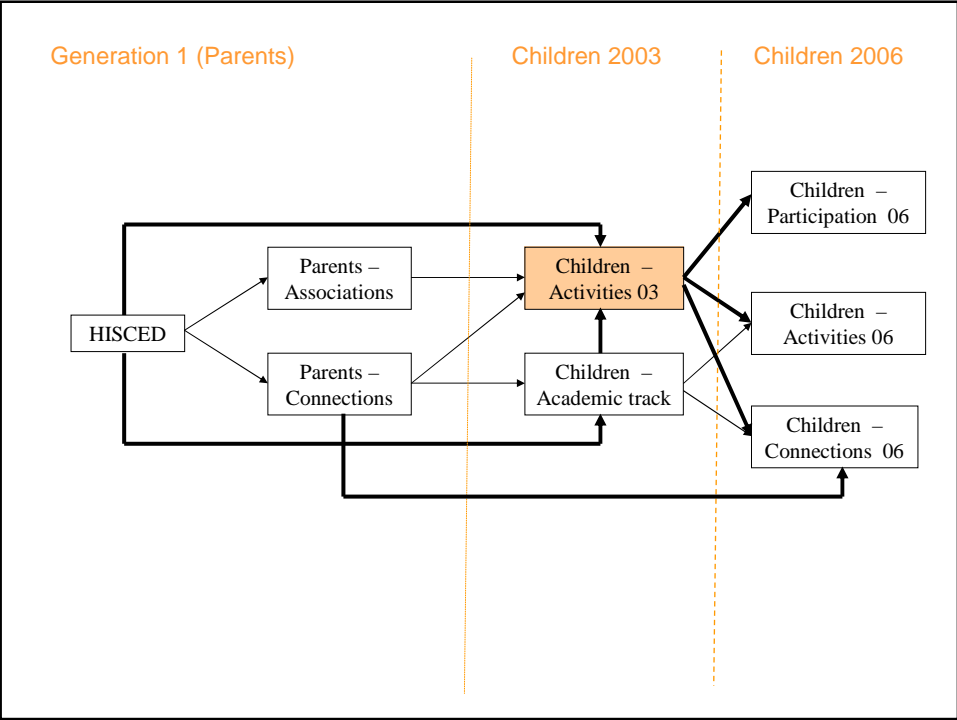
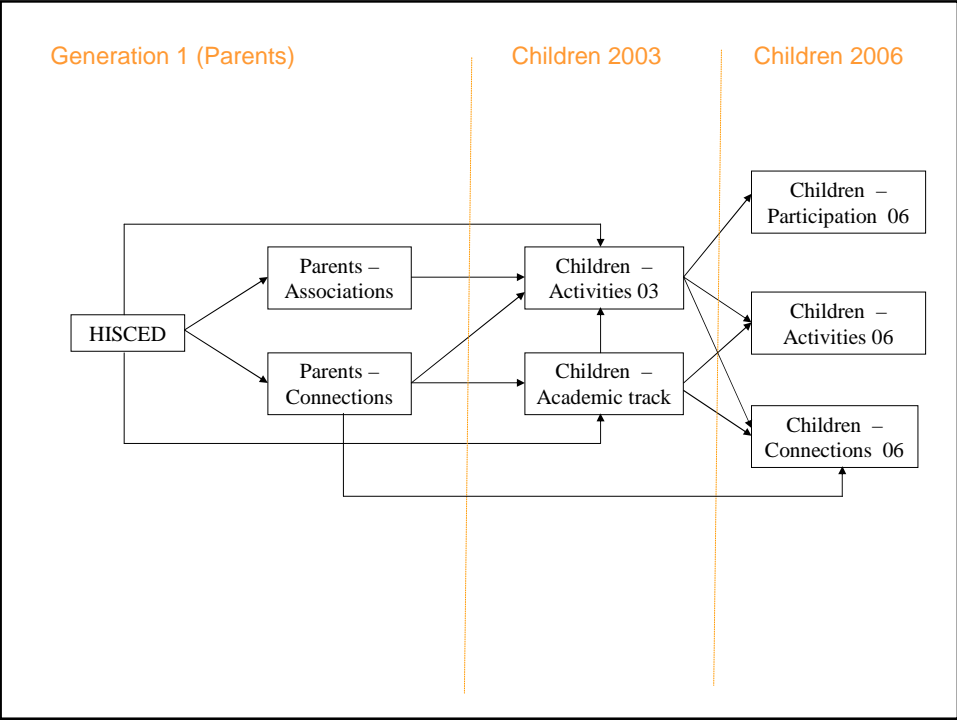
- There is significant, though moderate, correlation between all measures of parents' and children's social capital, and the level of social capital of parents and their children is similar → **there is transmission of social capital;**
- There is rather high stability of trust and participation in extracurricular activities over time, but there are also life cycle changes (decline of trust and activities) → **social capital is created early in life, but is subject to life cycle periods;**
- With the exception of social trust, different types of social capital are interlinked and moderately positively correlated one another → **there is interchangeability of some types of social capital**



## Preliminary conclusions

- General trust seems to be transmitted directly during socialization (only trust of parents is an effective predictor); while other types of social capital are created through more complex mechanisms.
- By far, the most important predictor of participation is previous and current attendance of extra-curriculum activities.
- Although family background does matter, its effect is rather indirect and it influences social capital through children's attendance of particular school type and extra-curricular activities.

## Further steps



Happy to hear your comments now ...

... or to read it at:

Arnošt Veselý  
The Institute of Sociology  
Academy of Sciences of the Czech Republic  
Department of Social Stratification  
Jilská 1, 110 00 Prague 1  
E-mail: [arnost.vesely@soc.cas.cz](mailto:arnost.vesely@soc.cas.cz)

Thanks for your attention !