

Successful and Unsuccessful Intergenerational Transfer of Educational Attainment on Wellbeing in the Swiss Youth Cohort TREE

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1 Introduction

Educational attainment is considered the most important contributor to status and occupational achievement in modern societies. As with status and occupation, educational attainment is to a large extent dependent on social background (Becker and Lauterbach, 2004; Blau et al., 1967; Bourdieu and Passeron, 1971; Breen and Goldthorpe, 1997). Successful or unsuccessful transfer of educational attainment from parents to their offspring is likely to have various consequences. Some of the consequences of these socio-structural arrangements may be of an intra-individual nature such as individual wellbeing. This link is strongly supported by a vast body of socio-psychological wellbeing research (e.g., Eckersley et al., 2006; Keyes, 1998).

The sociological dimension of general wellbeing and its increasing societal significance is outlined in, and demonstrated by, recent policy documents (CERI/OECD, 2001; Europe, 2008; Healy and Cote, 2001). For instance, subjective wellbeing may be understood as an indicator of social integration and the capacity of a society to meet the needs and aspirations of its members (Hadjar et al., 2008, 1). More generally, societal processes of individualization contribute to the increasing importance of a sense of self (Kitayama and Markus, 1994; Triandis, 1995) and, correspondingly, increasing significance and emphasis is placed on personal wellbeing (Bergman, 1998; Bergman and Scott, 2001). Although wellbeing can be understood to have an important sociological dimension, a coherent framework linking intergenerational educational transfer and wellbeing does not exist to date. While the relevant literature covers the interplay between intergenerational social mobility, education, and intergenerational educational mobility, the effects of intergenerational transfer of educational attainment on wellbeing are not well understood, especially in longitudinal analyses. In this paper, we explore the consequences of successful and unsuccessful intergenerational transfer of educational attainment on wellbeing (i.e., self-esteem, positive attitude toward life) over time within a theoretical work derived from Pierre Bourdieu.

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First, we will give an overview on how social mobility is linked to education concerning the consequences of educational expansion and, second, with regard to persisting inequalities. Based on an outline of the relevant scientific literature, we will show how wellbeing may be affected by these developments. We will then argue that the concept of *habitus* may be used to explain this interplay within the context of our study. Hypotheses derived from this discussion will be tested using data from the Transition from Education to Employment Project (TREE). Using autoregressive structural equation models, we will show how successful and unsuccessful intergenerational transfer of educational attainment affects the stability of wellbeing.

This article thus aims at shedding light on larger societal and social dynamics in the form of intergenerational educational mobility and its effects on wellbeing over time.

2 Theoretical frame

2.1 Intergenerational social mobility and education: educational expansion and its consequences

In democratic societies, differences in social status are considered fair when legitimized by achievement, rather than by social origin (meritocratic ideal; see for example Erikson and Goldthorpe, 1992). Therefore, social mobility should be strongly related to educational attainment. During the 1940s, for example, it was expected that educational expansion would reduce the impact of social origin on the social status of young people (Marshall, 1992 [1949]). Similarly, until at least the 1950s, it was thought that the educational system was the key mechanism capable of, and responsible for, allocating social positions according to meritocratic principles (*ibid.*; Schelsky, 1957). In addition to ongoing educational expansion, the last decades have been characterized by a strong emphasis on knowledge in general (Knorr-Cetina, 1981) and higher intellectual demands on working life. Consequently, educational aspirations of parents and youth are rising (Baumert and Schümer, 2002; Birkelbach, 2001; Eccles, 2006; Eckersley et al., 2006; Müller and Haun, 1994; Raab, 2003; Wessel et al., 1999), reinforcing the importance of upper secondary education (Baethge et al., 2007): completion of upper secondary education has become a crucial prerequisite for reliable employment and social integration in most European countries (Solga, 2002; Troltsch, 2000).

Despite these more recent developments, the influence of social origin on educational attainment persists in most European countries (Breen and Goldthorpe, 1997; Crisholm and Hurrelmann, 1995; Erikson, 1992; Erikson et al., 1979). While in some Scandinavian countries social inheritance has diminished considerably over recent decades (Esping-Andersen, 2004), in Switzerland, social inequalities with

regard to educational attainment are still considerable, i. e. intergenerational transfer of educational attainment remains powerful and fairly stable over time (Joye et al., 2003). Moreover, recent comparative studies emphasize that new social inequalities are arising due to globalization (Blossfeld et al., 2007; Buchholz et al., 2009; Giddens, 1990, 1994). Globalization and individualization lead to pluralized pathways, which are characterized by frictions and delays (Bradley and Nguyen, 2004; Crisholm and Hurrelmann, 1995; OECD, 1998). Consequently, chances of failure are increasing as well (Eckersley, 2009; Eckersley et al., 2006). Against the backdrop of rising aspirations and risks of failure, the transfer of educational attainment from parents to their offspring is likely to affect personal wellbeing.

As the possible effects of intergenerational transfer of educational attainment on wellbeing are not well explored, we will give an overview of existing research on wellbeing with a focus on the relation between wellbeing and education. This will serve to elaborate aspects of wellbeing that might be affected by educational status transfer differentials.

2.2 Intergenerational educational mobility and wellbeing

Wellbeing appears prominently in an ever-increasing amount of literature in the social sciences on the social, psychological, and economic consequences of educational outcomes. It can be conceptualized as including psychological, social, cultural, and economic components, including life satisfaction or happiness (e. g., Blanchflower, 1997, 2000, 2007; Michalos, 2008), health (e. g., Bartley, 2004), quality of life, e. g. the congruence between objective life circumstances and their subjective evaluation (Noll, 1999; Offer, 1996), and various socio-psychological aspects (Keyes, 1998, 2000, 2006).

Wellbeing has a long tradition in psychological research (Diener and Biswas-Diener, 2000; Diener et al., 1999). It is understood as a complex and multidimensional phenomenon reflecting individuals' evaluations of their current life situation and themselves. Wellbeing comprises aspects of mental and physical health (e. g. health problems, affectivity, positive attitude toward life, self-esteem, self-efficacy, and so on), satisfaction with different areas of life, and substance (ab)use (Bergman and Scott, 2001; Grob et al., 1991, 1996; Pollard and Lee, 2003; Trzesniewski et al., 2003; Walter-Wydler, 1997). The psychological research tradition concerning education and wellbeing, treats education as a static construct. Within the Swiss context, only few studies focus on the effects of transitions and their impact on wellbeing. For example, Semmer et al. (2005) analyzed wellbeing of youths entering the Swiss labor market, focusing especially on the impact of work characteristics. However, intergenerational transfer of educational attainment is not the focus of this study, which holds true also for other research of this type (for an overview see Salmeron-Aro and Tuominen-Soini, 2009).

From a socio-psychological point of view, Keyes (1998) criticizes the traditional concepts of wellbeing, which operationalize wellbeing as a subjective evaluation of life and therefore portray wellbeing as a primarily private phenomenon. He argues for a broader conceptualization of wellbeing, which takes the division of public and private life into account since both are potential sources of life challenges with distinct consequences for judging wellbeing. This sociological conceptualization of wellbeing is supported by findings from Walter-Wydler et al. (1997). They found that a sense of coherence is one of the most powerful predictors of wellbeing and that there seems to be no correlation between economic situation, welfare levels, and subjectively assessed quality of life. Sociological research underlines that social status and education, age, social networks, health, and psychological aspects such as self-efficacy are important predictors of life satisfaction (Hadjar et al., 2008; Keyes, 1998). Furthermore, Hadjar et al. (2008) emphasize the relation between educational attainment and wellbeing, examining the dynamics of subjective wellbeing in terms of life satisfaction for different cohorts and periods. They found that wellbeing is not only influenced by educational attainment itself but also by intergroup-comparison, aspiration level, and a sense of one's place in society. Solga (2002) points out that young people who do not complete upper secondary education have become a stigmatized minority. This stigmatization leads to psychological problems for this minority as well as to social tensions. Furthermore, Troeltsch (2000) underlines that people without completed upper secondary education are less satisfied with their situation, and they judge their future prospects pessimistically. It can be argued that such future prospects are likely to be associated with negative evaluations of one's life and a relatively low assessment of personal worth (Bushnik et al., 2004).

There is a general lack of research covering the Swiss case of intergenerational educational transfer as a dynamic construct, of longitudinal studies covering the time span between lower and upper secondary school in particular, and of analyses combining established scales with a dynamic understanding of education in order to understand to which extent educational differentials affect wellbeing.

In this article, we analyze intergenerational transfer of educational attainment, focusing on the transition phase from lower to, and throughout, upper secondary education, intergenerational comparison (parents-children), as well as quasi-objective and subjective wellbeing.

Low and unstable wellbeing may be a consequence of socio-structural processes. Among other reasons, low and unstable wellbeing is likely, if overambitious educational goals are not met (Hadjar et al., 2008; Kirkpatrick Johnson, 2002). These aspects may be appropriately assessed by two sub-concepts of wellbeing: a positive attitude toward life and self-esteem. A positive attitude toward life is an anticipation of how one can live under current and future life circumstances. Self-esteem gives insight into a comprehensive and comparative sense of self-worth, i. e. how individuals evaluate their own value in relation to significant others. While

the psychological literature mainly emphasizes the stability of self-esteem (Ferring and Filipp, 1996), Trzesniewski (2003) claims that the stability of self-esteem is low during childhood, increases throughout adolescence, and declines during middle years and old age. While Sandmeier (2005) found differences in level and in stability of self-esteem during young adulthood, Semmer et al. (2005) found wellbeing to be considerably stable over time in their study of youths entering the Swiss labor market. The pedagogical literature emphasizes that self-esteem and a positive attitude toward life have to be stabilized during critical transitions (Kornmann, 2005; Schröder-Naef and Jörg-Fromm, 2004). Generally, the stability of other dimensions of wellbeing, such as life-satisfaction, is considered as high, although recent findings suggest considerable variation during specific life phases, especially in adolescence (Salmera-Aro and Tuominen-Soini, 2009).

2.3 Theoretical framework and hypotheses

The theoretical integration of societal and individualistic processes has been among the main challenges of sociological theory in the past 50 years, especially in relation to how structural and intra-individual phenomena are related. Pierre Bourdieu (1983) has had a particularly lasting effect in relation to structure-agency theorization, as has his work on intergenerational transfer of educational attainment. Thus, we will draw on his work, particularly the concept of *habitus*, in the conceptualization of the relationship between structural phenomena, i. e. intergenerational transfer of educational attainment, and subjective phenomena, i. e. intra-individual wellbeing.

According to Bourdieu (1983), most parents aim at transferring or enhancing their own socio-economic status to their offspring, and children often use these aspirations as personal guidelines. This aim is supported by the specific *habitus* of the offspring, which develops during early childhood and is characterized by a considerable inertia. A person's *habitus* reflects embodied beliefs and durable dispositions, and it enables a response to the requirements of specific socio-cultural fields. The *habitus* comprises aspirations and a sense of one's place, as well as self-esteem. Additionally, expectations toward life in general (e. g. positive attitude toward life) and educational careers in particular (Bourdieu, 1997) belong to a person's *habitus*. In this sense, we focus on self-esteem and positive attitude toward life, including an evaluation of one's current life and sense of personal worth. Bourdieu and Passeron (1971) emphasize that social inequalities in transfer of educational attainment cannot be explained solely by differences in skills among pupils: family resources including cultural capital and *habitus* are to be considered as well. They argue that children from higher social classes perform better in school, because schools value certain skills at the expense of others. Moreover, school achievement consistently appears to be influenced by children's incorporated cultural capital and *habitus*, because they influence teachers' evaluations of pupils' skills. This is supported by the current state of research: school systems not only seem to be reproducing social inequalities, but

they also seem to reinforce them. Recent results from PISA studies reveal that the influence of social background on pupil attainment is higher in Switzerland than in most other OECD countries (BFS and EDK, 2002; Coradi Vellacott et al., 2003; Jungbauer-Gans, 2004; OECD/PISA, 2001; Ramseier and Brühwiler, 2003). The varying strength of the impact on social background is often explained by structural characteristics of the educational system (Gomolla and Radtke, 2002; Hillmert, 2004; Kronig, 2007): educational systems with many thresholds and early tracking seem to reinforce social inequalities as a result of the cumulative impacts of existing social inequalities (Hillmert, 2004). In countries with a strong dual vocational education and training (VET) system like Switzerland, the entry to upper secondary education is a particularly crucial point (Gangl et al., 2003) and serves as a stepping stone for a considerable part of the population (Hupka, 2003).

During the transition from lower to upper secondary education, individual aspirations must often accommodate actually attained positions. Throughout this crucial phase different developmental challenges are faced, and a stable and realistic view on the world should be established (Havighurst, 1972 [1948]; Seiffge-Krenke and Gelhaar, 2006). Considerable divergence between aimed-at and achieved educational attainment is likely to have an effect on individual wellbeing (Birkelbach, 2001; Kirkpatrick Johnson, 2002). More precisely, we expect that the inertia of habitus can result in a dissonance between intra-individual and inter-individual levels: in the former, educational differentials may generate tensions between the adolescents' habitus and newly acquired forms of Bourdieuan capital, while in the latter, processes of alienation may result from differences to the educational status of parents and peers. Tensions on intra-individual and inter-individual levels are likely linked to individuals' sense of place. These tensions arise from unsuccessful intergenerational transfer of educational attainment, i. e. when highly educated parents fail to transfer their educational status to their offspring. Against the backdrop of educational expansion, intergenerational transfer of educational attainment on low levels of education may be considered as unsuccessful too. The effects on wellbeing may be even worse compared to the failure of transfer of educational attainment from highly educated parents, since people with low levels of education tend to have relatively higher aspirations regarding their offspring (Birkelbach, 2001). Accordingly, intergenerational transfer of educational attainment may be considered as successful, when highly educated parents transfer the cultural capital without loss, or less educated parents succeed in sending their children to university or other institutions of tertiary education. In the first case, there are no educational differentials, which may create tensions, in the second, educational differentials between relatively less-educated parents and highly educated offspring, are less likely to affect the stability of wellbeing, since the parents' aspirations were met or exceeded.

Accordingly, we hypothesize that unsuccessful intergenerational transfer of educational attainment, especially downward educational mobility, effects the stability

of wellbeing over time, thereby reflecting the tensions between socio-structural and intra-individual positions. The above considerations lead to the following formal hypotheses:

- H1: Successful transfer of educational attainment is positively associated with stability of wellbeing over time.
- H2: Unsuccessful transfer of educational attainment is negatively associated with stability of wellbeing over time.
- H3: Unsuccessful transfer of educational attainment combined with downward educational mobility is associated with the lowest stability of wellbeing over time.¹

3 Methods

3.1 Data

We examine the effects of intergenerational transfer of educational attainment on wellbeing by analyzing panel data from the Transition from Education to Employment Project (TREE). TREE (2008)² focuses on post-compulsory educational and labor market pathways of a school leavers' cohort in Switzerland. It is based on a sample of approximately 6000 young people who left compulsory schooling in 2000 (Table 1). Annual panel waves were conducted from 2001 (wave 1) to 2007 (wave 7). At the time of the first interview, the age range of the middle fifty percent of the youths was between 16.5 and 17.3 years.

As with all large-scale social science panel data, missing data are a problem, due mostly to panel attrition. We included in the analysis only individuals who participated in wave 7 and where complete data on their father's educational level is available, which resulted in a sample size of $n = 3869$. Wave non-response averages 5.3% and item non-response 16.2% for the variables used for analysis in this subsample. In order to obtain a sufficient number of cases for multigroup analyses and reasonable statistical power, missing values were replaced by imputation. To evaluate the robustness of our models, we compare different methods of missing value imputation.³

1 NB: We are referring to levels of temporal stability and not to absolute levels at single measurement points.

2 TREE has been running since 2000 and has been funded by the Swiss National Science Foundation, the University of Basel, the Swiss Federal Office of Statistics, the Federal Office of Professional Education and Technology, and the cantons of Berne, Geneva, and Ticino. This article is financed in part by the Swiss National Science Foundation's grant 10FI13-120796.

3 ICE (Royston 2004), weighting, and mean replacement.

Table 1 Data sets and sample size

Year of data collection	2000	2001	2002	2003	2004	2005	2006	2007
Average age of respondents	16	17	18	19	20	21	22	23
Surveys	PISA 2000	TREE Wave 1	TREE Wave 2	TREE Wave 3	TREE Wave 4	TREE Wave 5	TREE Wave 6	TREE Wave 7
Sample size and return rates	valid sample	6343	5944	5609	5345	5060	4852	4669
	return absolute	5528	5206	4877	4679	4506	4133	3979
	% return/ wave	87	88	87	88	89	85	85
	% return total	87	82	77	74	71	65	63

3.1.1 Operational definitions

The educational outcome was constructed using levels of education derived from the International Standard Classification of Education (ISCED; UNESCO, 1997). The central criteria of construction was the educational norm of completed secondary education, as discussed above (cf. Solga, 2002; Troltsch, 2000).

Table 2 Defining groups of intergenerational transfer of educational attainment

<i>Educational status of adolescent</i>	<i>Educational status of father</i>	
	Max. compulsory school and upper secondary education	Access to and tertiary education
Without upper secondary education and with upper secondary education	unsuccessful educational status transfer (stable on a low level) <i>n</i> = 1707	unsuccessful educational status transfer (downward mobility) <i>n</i> = 530
Matura, BMS, FMS, and tertiary education	successful educational status transfer (upward mobility) <i>n</i> = 922	successful educational status transfer (stable on a high level) <i>n</i> = 710

N = 3869

In the top row of this table, the fathers' highest education is shown, grouped from an ISCED variable, which was taken from the PISA dataset. In the first column, the adolescents' highest certificate obtained seven years after completing compulsory school is presented. At this time, 84% of the cohort had graduated from upper secondary education (Stalder et al., 2008). This figure is comparable to the official 90% (OPET, 2008) of a cohort graduating at upper secondary level. A cross-tabulation of these variables results in different combinations of intergenerational transfer of

educational attainment (Table 2). Educational transfer is defined as successful, if children have a higher educational status than their parents or if they are stable on a high level. Transitions are defined as unsuccessful, if parents have achieved tertiary education or obtained a certificate, which would entitle them to access tertiary education and their children do not reach this educational level. It is also defined as unsuccessful, if families are stable on a lower level, i. e. ISCED-level 3A. This is justified against the backdrop of educational expansion and the rising educational ambitions of families (Baumert and Schümer, 2002).

3.1.2 Wellbeing⁴

Positive attitude toward life is comprised of a five item construct⁵ developed by Grob et al. (1991):

- > My future looks bright; (Mean = 4.73, SD = 0.75).⁶
- > I am happy to live; (Mean = 5.27, SD = 0.77).
- > I am happy with the way my life plan unfolds; (Mean = 4.64, SD = 0.83).
- > Whatever happens, I can see the positive side of it; (Mean = 4.48, SD = 0.83).
- > My life seems to be meaningful; (Mean = 4.96, SD = 0.88).

This sub-concept includes an evaluation of one's current life situation and also evaluations of one's future prospects. Each item is rated from 1 (totally disagree) to 6 (totally agree).

Our operationalization of *self-esteem* consists of a reduced scale⁷ developed by Rosenberg (1979):

- > On the whole, I am satisfied with myself; (Mean = 4.02, SD = 0.67).
- > I feel that I have a number of good qualities; (Mean = 4.26, SD = 0.56).
- > I am able to do things as well as most other people; (Mean = 4.13, SD = 0.61).
- > I feel that I'm a person with worth, at least on an equal plane with others; (Mean = 4.09, SD = 0.69).

This sub-concept of wellbeing allows us to examine an important aspect of our research questions: how does an adolescent assess her personal worth in relation to that of other young people? Each item is rated from 1 (does not apply) to 5 (applies strongly).

4 Both scales are internationally standardized.

5 Cronbach's $\alpha = .884$ (mean of Cronbach's α for each wave, calculated on the basis of weighted and mean-imputed data).

6 Reported mean is the aggregated mean of an item over all waves; standard deviation is calculated analogously on the basis of weighted and mean-imputed data.

7 Cronbach's $\alpha = .773$ (mean of Cronbach's α for each wave, calculated on the basis of weighted and mean-imputed data).

3.2 Analysis

We employed multigroup autoregressive structural equation models (Bollen and Curran, 2004) for different groups of intergenerational educational status transfer differentials. Autoregressive models are a specific application of structural equation modeling (SEM), which allows to combine factor analysis and linear regression. To our knowledge, there is no other method suitable to study the stability of latent constructs over time and over different groups than autoregressive structural equation modelling. Within this modeling framework, apart from the exogenous construct, each construct is a function of its lagged measure at the preceding wave and a residual. This multivariate strategy of analysis allows for testing the hypothesized differences of stability over time between groups based on individual level data. We did not constrain the paths between waves because we are interested in the variation of stability among groups and individuals over time.

4 Results

First, we tested the model for self-esteem. All reported results are based on weighted and mean-imputed data.⁸ The correlations between the waves and groups vary considerably (Figure 1).

All groups initially, i. e. for waves 1 to 3, exhibit high correlations hence indicating high stability over time (Figure 1). The observed differences between the groups are quite similar at this stage. When taking the group of adolescents with educational downward mobility as a baseline, the stability of self-esteem over time decreases from wave 3 onward, whereas the other groups display relative stability over all measurement points. These differences are substantial for correlations between waves 3, 4, 5, 6, and 7. For example, differences in stability between the group with successful ITEA and those with unsuccessful ITEA are all statistically significant at $p < 0.05$ (see appendix Table 1 for critical ratios for differences). Thus the data strongly support our hypotheses, i. e. that successful transfer of educational attainment is positively associated with stability of wellbeing over time (H1), that unsuccessful transfer of educational attainment is negatively associated with stability of wellbeing over time (H2), and that unsuccessful transfer of educational attain-

8 The models were estimated using AMOS 16.0 (Arbuckle 2006). We assessed the models using different fit-indicators. Due to the comparatively large sample sizes, the χ^2 -test was highly significant ($p < .001$; $\chi^2_{SELE} = 4300$, $df = 1040$), but other indicators suggest a good model fit: $CMIN/df = 4.135$, $CFI = .929$, $NFI = .909$, $RMSEA = .028$. The results of the different imputation methods differ with regard to the level of stability but the pattern is similar over the differently tested imputation methods for both sub-concepts of wellbeing. Being aware of defining intergenerational educational transfer in the context of educational expansion, we tested two ways of defining educational mobility. Both sets of results show similar patterns.

ment combined with downward educational mobility is associated with the lowest stability of wellbeing over time (H3).

Figure 1 Correlations between waves for self-esteem for different groups of intergenerational transfer of educational attainment (ITEA)

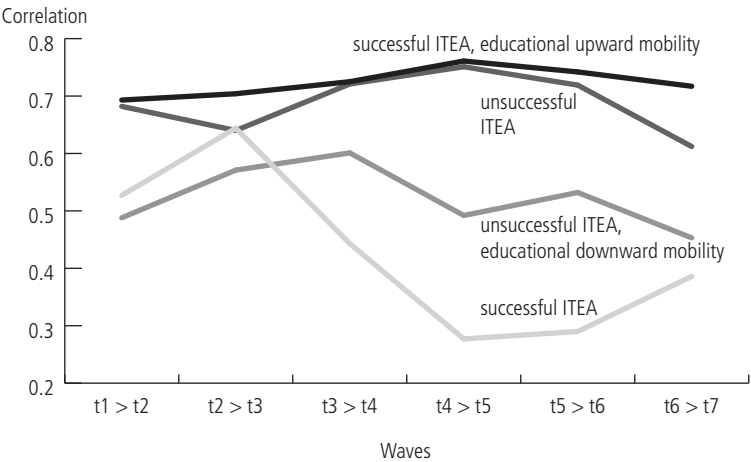
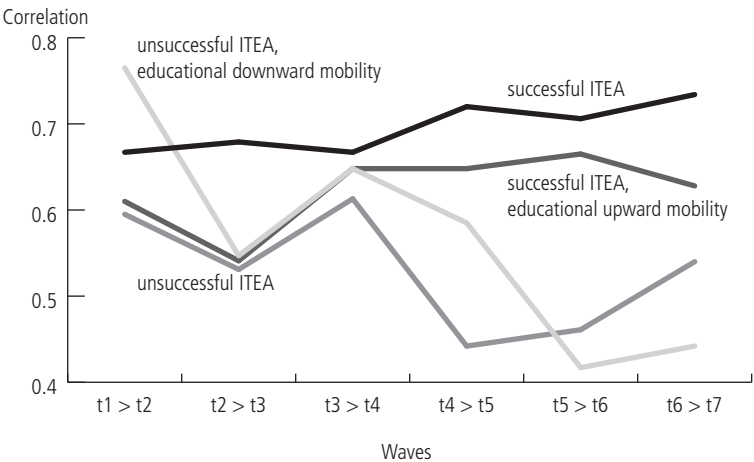


Figure 2 Correlations between waves for positive attitude toward life for different groups of intergenerational transfer of educational attainment (ITEA)



The model⁹ for positive attitude toward life is less clear, but a similar pattern emerges (Figure 2). Adolescents experiencing successful intergenerational transfer of educational attainment show higher levels of stability of positive attitude toward life, whereas adolescents with unsuccessful intergenerational educational transfer show lower levels, thus corroborating our hypotheses 1 and 2. Interestingly, the point where the stability of positive attitude toward life over time starts to differentiate is situated one wave later than the equivalent point when considering self-esteem. The differences between downwardly mobile adolescents and those whose positive attitude toward life remains stable on a low level of educational attainment is much smaller when considering a positive attitude toward life than it is in the case of self-esteem. Thus, hypothesis 3 is not fully supported by the results of positive attitude toward life.

The slight divergence from our hypothesis might be due in part to possible multifaceted aspects of the measurement of positive attitude toward life, comprising general evaluations of one's current life situation ("I am happy to live", "My life seems to be meaningful"), and future prospects ("My future looks bright", "I am happy with the way my life plan unfolds"). Compared to the findings for self-esteem, the initially low level of stability of positive attitude toward life for upwardly mobile adolescents is striking. This peculiarity may be attributed to the measured future prospects as well. The latter may be deemed not as unconditionally promising as for adolescents with highly educated parents. Interestingly, stabilization rises upon entry to labor market and tertiary education, starting from wave 3 (Figure 2). This effect may be accounted for by a certain sense of achievement.

5 Discussion and conclusions

In this paper, we analyzed the influence of successful and unsuccessful intergenerational transfer of educational attainment on the stability of personal wellbeing, focusing on the transition from lower to, and throughout, upper secondary education as an example of how the interplay between societal and individual processes takes place.

We argued that the concept of habitus (Bourdieu, 1982) may be used to explain this interplay within the context of our study: during these transitions considerable divergence between aimed-at and achieved educational attainment occur when intergenerational educational transfer is not successful. We hypothesized that this should lead to intra-individual tensions, i. e. to unstable wellbeing, because newly acquired forms of cultural capital do not fit to the inert habitus (esp. aspirations). On the other hand, tensions might occur due to alienation processes resulting from differences to the parents' educational status. These hypotheses were examined by

9 $p < .001$; $\chi^2_{\text{posl}} = 8196$, $df = 1796$, $\text{CMIN}/df = 4.564$, $\text{CFI} = .917$, $\text{NFI} = .896$, $\text{RMSEA} = .030$.

analyzing panel data from the Transition from Education to Employment Project, employing autoregressive models for different groups of intergenerational educational status transfer differentials.

The results of the autoregressive models demonstrate that the tested groups show different patterns of stability of wellbeing over time. While successful, i. e. upwardly mobile and highly educated youth exhibit stable wellbeing over time, the group with downward educational mobility experience significant less stable wellbeing. These findings contrast to Semmer et al. (2005), who found adolescents' wellbeing at the second threshold to be fairly stable, and on the other hand to Trzesniewski's (2003) results, who described adolescence as characterized by a rising stability of self-esteem.

The scope of our findings is limited in that they are based on a cohort study. This complicates the task of separating time and cohort effects. It is also incontestable that the described effects may be influenced by volatile life situations, e. g. changing of training or developments outside and inside the educational system. This view is supported when considering personal employment situation as one of the most important factors of wellbeing (Hadjar et al., 2008). Apart from educational and occupational elements of life course context, critical life events, such as moving out or a relative's death, could also play a role in affecting wellbeing. Further analyses showed that although the examined educational status transfer groups differ significantly on the occurrence for a series of examined critical life events, the pattern of differences for different groups did not appear to be systematic. Thus, the observed effects may be explained by intergenerational transfer of educational attainment and are not merely due to age or life course effects.

In summary, our analyses demonstrate how unsuccessful intergenerational transfer of educational attainment is related to a temporal instability of wellbeing, especially with respect to self-esteem and a positive attitude toward life. Beyond these substantive findings, we outlined an example of how structural phenomena, i. e. intergenerational transfer of educational attainment, and subjective phenomena, i. e. intra-individual wellbeing, may be linked via the habitus concept.

These results encourage further research given the importance of educational attainment and wellbeing for life chances in general, societal integration, and the labor market. The dynamic nature of the link between intergenerational transfer of educational attainment and wellbeing should be accounted for by more longitudinal studies. In addition, the interplay between self-esteem and positive attitude toward life is worth further examination, where significant differences between intergenerational transfer groups occur. Moreover, analyses considering entry into labor market would shed further light on the issues covered here. Finally, gender- and migration status-sensitive analyses are needed as wellbeing in association with educational mobility and labor market entry are most likely experienced differently by different social groups. These studies do not only hold great promise in adding

to the understanding of the specific phenomena under investigation, but may also elucidate the relationship between social structures and embedded agencies in a Bourdieuan sense.

6 References

- Arbuckle, James L. 2006. *SPSS: Amos™ 16.0 User's Guide*.
- Baethge, Martin, Heike Solga, and Markus Wieck. 2007. *Berufsbildung im Umbruch. Signale eines überfälligen Aufbruchs*. Friedrich-Ebert-Stiftung, Berlin.
- Bartley, Mel. 2004. *Health Inequality, an Introduction to Theories, Concepts and Methods*. Cambridge: Polity Press.
- Baumert, Jürgen and Gundel Schümer. 2002. «Familiäre Lebensverhältnisse, Bildungsbeteiligung und Kompetenzerwerb im nationalen Vergleich.» In J. Baumert, C. Artelt, E. Klieme, and et al. (Eds.), *PISA 2000 – Die Länder der Bundesrepublik Deutschland im Vergleich*. Opladen: Leske + Budrich.
- Becker, Rolf and Wolfgang Lauterbach. 2004. «Dauerhafte Bildungsungleichheiten – Ursachen, Mechanismen, Prozesse und Wirkungen.» In Rolf Becker and Wolfgang Lauterbach (Eds.), *Bildung als Privileg? Erklärungen und Befunde zu den Ursachen der Bildungsungleichheit*. Wiesbaden: VS Verlag für Sozialwissenschaften.
- Bergman, Manfred Max. 1998. Acculturation, Identity, and Intergroup Relations between Mexican Americans and European Americans. PhD dissertation. Cambridge: University of Cambridge.
- Bergman, Manfred Max and Jacqueline Scott. 2001. Young adolescents' wellbeing and health-risk behaviours: gender and socio-economic differences. *Journal of Adolescence*, 24: 183–197.
- BFS and EDK (Eds.). 2002. *Für das Leben gerüstet? Die Grundkompetenzen der Jugendlichen – Nationaler Bericht der Erhebung PISA 2000. Bildungsmonitoring Schweiz*. Neuchâtel: Bundesamt für Statistik (in Ko-Edition mit der Schweizerischen Konferenz der kantonalen Erziehungsdirektoren EDK).
- Birkelbach, Klaus. 2001. Die Janusköpfigkeit elterlicher Statusaspirationen für ihre Kinder. Der Selbstbezug intergenerativer Statusaspirationen in einer Kohorte ehemaliger Gymnasiasten. *Zeitschrift für Soziologie der Erziehung und Sozialisation*, 21(4): 410–429.
- Blanchflower, David G. 1997. *The Rising Well-Being of the Youth*. Cambridge (Mass.): NBER.
- Blanchflower, David G. 2000. *Well-Being Over Time in Britain and the USA*. Cambridge (MA): NBER.
- Blanchflower, David G. 2007. *Is Well-Being U-Shaped Over Life Cycle?* Cambridge (MA): NBER.
- Blau, Peter Michael, Otis Dudley Duncan, with the collaboration of Andrea Tyree. 1967. *The American occupational structure*. New York: Wiley.
- Blossfeld, Hans-Peter, Sandra Buchholz, Dirk Hofäcker, Heather Hofmeister, Karin Kurz, and Melinda Mills. 2007. Globalisierung und die Veränderung sozialer Ungleichheiten in modernen Gesellschaften. *Kölner Zeitschrift für Soziologie und Sozialpsychologie*, 59(4): 667–691.
- Bollen, Kenneth A. and Patrick J. Curran. 2004. Autoregressive Latent Trajectory (ALT) Models: A Synthesis of Two Traditions. *Sociological Methods & Research*, 32(3): 336–383.
- Bourdieu, Pierre. 1982. *Die feinen Unterschiede. Kritik der gesellschaftlichen Urteilskraft*. Frankfurt am Main: Suhrkamp.
- Bourdieu, Pierre. 1983. *Ökonomisches Kapital, kulturelles Kapital, soziales Kapital*. Göttingen: Schwartz.

- Bourdieu, Pierre. 1997. «Zur Genese der Begriffe Habitus und Feld» In Magareta Steinrück (Ed.), *Der Tote packt den Lebenden. Schriften zu Politik und Kultur*. Hamburg: VSA-Verlag.
- Bourdieu, Pierre and Jean-Claude Passeron. 1971. *Die Illusion der Chancengleichheit*. Stuttgart: Klett.
- Bradley, Steve and Anh Ngoc Nguyen. 2004. "The school-to-work transition." In Geraint Johnes and Jill Johnes (Eds.), *International Handbook on the Economics of Education*. Cheltenham, Northampton: Edward Elgar Publishing Ltd.
- Breen, Richard and John H. Goldthorpe. 1997. Explaining educational differentials: Towards a formal rational action theory. *Rationality and Society*, 9(3): 275–305.
- Buchholz, Sandra, Dirk Hofacker, Melinda Mills, Hans-Peter Blossfeld, Karin Kurz, and Heather Hofmeister. 2009. Life Courses in the Globalization Process: The Development of Social Inequalities in Modern Societies. *European Sociological Review*, 25(1): 53–71.
- Bushnik, Tracey, Lynn Barr-Telford, and Patrick Bussière. 2004. *In and Out of High School: First Results from the Second Cycle of the Youth in Transition Survey, 2002*. Minister responsible for Statistics Canada Minister of Industry.
- CERI/OECD (Eds.). 2001. *The Well-being of Nations. The Role of Human and Social Capital*. Paris: OECD.
- Coradi Vellacott, Maja, Judith Hollenweger, Michel Nicolet, and Stefan C. Wolter. 2003. *Soziale Integration und Leistungsförderung. Thematischer Bericht der Erhebung PISA 2000*. Neuchâtel: BFS/EDK.
- Crisholm, Lynne and Klaus Hurrelmann. 1995. Adolescence in modern Europe. Pluralized transition patterns and their implications for personal and social risks. *Journal of Adolescence*, 18: 129–158.
- Diener, Ed and Robert Biswas-Diener. 2000. *New Directions in Subjective Well-being Research. The Cutting Edge*. Illinois Pacific University. Illinois.
- Diener, Ed, Eunkook Suh, M. , Richard E. Lucas, and Heidi L. Smith. 1999. Subjective well-being: three decades of progress. *Psychological Bulletin*, 125(2): 276–302.
- Eccles, J. S. 2006. "A motivational perspective on school achievement. Taking responsibility for learning, teaching, and supporting." In Robert J. Sternberg (Eds.), *Optimizing Success in School with the Other Three Rs: Reasoning, Resilience, and Responsibility*. Greenwich: information age publishing.
- Eckersley, Richard. 2009. Population Measures of Subjective Wellbeing: How Useful are they? *Social Indicators Research*, 98(1): 1–12.
- Eckersley, Richard, Johanna Wyn, and Ani Wierenga. 2006. *Flashpoints & Signposts: Pathways to Success and Wellbeing for Australia's Young People*. Weston, Melbourne & Carlton South: Australian Youth Research Centre VicHealth.
- Erikson, Robert. 1992. *The Constant Flux. A Study of Class Mobility in Industrial Societies*. Oxford [etc.]: Clarendon Press.
- Erikson, Robert, John H. Goldthorpe, and Lucienne Portocarero. 1979. Intergenerational Class Mobility in Three Western European Societies: England, France and Sweden. *British Journal of Sociology*, 30(4): 415–441.
- Europe, Council of. 2008. *Well-being for All. Concepts and Tools for Social Cohesion*. Strasbourg: Council of Europe Publisher.
- Ferring, D. and S.-H. Filipp. 1996. Messung des Selbstwertgefühls: Befunde zu Reliabilität, Validität und Stabilität der Rosenberg-Skala. *Diagnostica*, 42(3): 384–3292.
- Gangl, Markus, Walter Müller, and David Raffé. 2003. "Conclusions: Explaining Cross-National Differences in School-to-Work Transitions." In Walter Müller and Markus Gangl (Eds.), *Transitions from Education to Work in Europe. The Integration of Youth into EU Labour Markets*. Oxford: Oxford University Press.
- Giddens, Anthony. 1990. *The Consequences of Modernity*. Cambridge: Polity Press.
- Giddens, Anthony. 1994. "Living in a post-traditional society." In U. Beck, A. Giddens, and S. Lash (Eds.), *Reflexive Modernization*. Cambridge: Polity Press.

- Gomolla, Mechthild and Frank-Olaf Radtke. 2002. *Institutionelle Diskriminierung. Die Herstellung ethnischer Differenz in der Schule*. Opladen: Leske + Budrich.
- Grob, Alexander, Todd D. Little, Brigitte Wanner, Alexander J. Wearing, and Euronet. 1996. Adolescents' well-being and perceived control across fourteen sociocultural contexts. *Journal of Personality and Social Psychology*, 71(4): 785–795.
- Grob, Alexander, Ruth Lüthi, Florian G. Kaiser, August Flammer, Andrew Mackinnon, and Alex J. Wearing. 1991. Berner Fragebogen zum Wohlbefinden Jugendlicher (BFW). *Diagnostica*, 37(1): 66–75.
- Hadjar, Andreas, Sigrid Haunberger, and Frank Schubert. 2008. Bildung und subjektives Wohlbefinden im Zeitverlauf, 1984–2002. Eine Mehrebenenanalyse. *Berliner Journal für Soziologie*, 18(3): 1–31.
- Havighurst, R. J. 1972 [1948]. *Developmental Tasks and Education*. New York: Longman.
- Healy, Tom and Sylvain Cote. 2001. *The Well-Being of Nations: The Role of Human and Social Capital. Education and Skills*. Paris: OECD.
- Hillmert, Steffen. 2004. «Soziale Ungleichheiten im Bildungsverlauf: Zum Verhältnis von Bildungsinstitutionen und Entscheidungen.» In Rolf Becker and Wolfgang Lauterbach (Eds.), *Bildung als Privileg? Erklärungen und Befunde zu den Ursachen der Bildungsungleichheit*. Wiesbaden: VS Verlag für Sozialwissenschaften.
- Hupka, Sandra. 2003. «Ausbildungssituation und Verläufe: Übersicht.» In BFS/TREE (Eds.), *Wege in die nachobligatorische Ausbildung. Die ersten zwei Jahre nach Austritt aus der obligatorischen Schule. Zwischenergebnisse des Jugendlängsschnitts TREE*. Neuchâtel: Bundesamt für Statistik.
- Joye, Dominique, Max Manfred Bergmann, and Paul S. Lambert. 2003. Intergenerational Educational and Social Mobility in Switzerland. *Schweizerische Zeitschrift für Soziologie*, 29(2): 263–291.
- Jungbauer-Gans, Monika. 2004. Einfluss des sozialen und kulturellen Kapitals auf die Lesekompetenz. Ein Vergleich der PISA-Daten aus Deutschland, Frankreich und der Schweiz. *Zeitschrift für Soziologie*, 5: 375–397.
- Keyes, Corey Lee M. 1998. Social Well-Being. *Social Psychology Quarterly*, 61(2): 121–140.
- Keyes, Corey Lee M. 2000. Subjective Change and Its Consequences for Emotional Well-Being. *Motivation and Emotion*, 24(2): 67–84.
- Keyes, Corey Lee M. 2006. Subjective Well-Being in Mental Health and Human Development Research Worldwide: An Introduction. *Social Indicators Research*, 77(1): 1–10.
- Kirkpatrick Johnson, Monica. 2002. Social Origins, Adolescent Experiences, and Work Value Trajectories during the Transition to Adulthood. *Social Forces*, 80(4): 1307–1340.
- Kitayama, Shinobu and Hazel Rose Markus. 1994. *Emotion and Culture: Empirical Studies of Mutual Influence*. Washington (D.C.): American Psychological Association.
- Knorr-Cetina, Karin. 1981. *The Manufacture of Knowledge – An Essay on the Constructivist and Contextual Nature of Science*. Oxford: Pergamon Press.
- Kornmann, Reimer. 2005. Can the Academic Self-Concept be Positive and Realistic? *Zeitschrift für Pädagogische Psychologie*, 19 3/2005: 129–132.
- Kronig, Winfried. 2007. *Die systematische Zufälligkeit des Bildungserfolgs. Theoretische Erklärungen und empirische Untersuchungen zur Lernentwicklung und Leistungsbewertung in unterschiedlichen Schulklassen*. Bern: Haupt.
- Marshall, Thomas Humphrey. 1992 [1949]. *Citizenship and Social Class*. London: Pluto Press.
- Michalos, Alex. 2008. Education, Happiness and Wellbeing. *Social Indicators Research*, 87(3): 347–366.
- Müller, Walter and Dietmar Haun. 1994. Bildungsungleichheit im sozialen Wandel. *Kölner Zeitschrift für Soziologie und Sozialpsychologie*, 46: 1–43.

- Noll, Heinz-Herbert. 1999. *Konzepte der Wohlfahrtsentwicklung: Lebensqualität und neue Wohlfahrtskonzepte. EU Reporting Working Paper Nr. 3*. Center for Survey Research and Methodology (ZUMA). Social Indicators Department. Mannheim.
- OECD (Eds.). 1998. *Thematic Review of the Transition from Initial Education to Working Life. Interim Comparative Report*. Paris: OECD/DEELSA. 5 May 2009 (<http://www.oilis.oecd.org/OLIS/1998DOC.NSF>).
- OECD/PISA (Eds.). 2001. *Knowledge and Skills for Life. First Results from PISA 2000*. Paris.
- Offer, Avner. 1996. *In Pursuit of the Quality of Life*. Oxford: Oxford University Press.
- OPET. 2008. *Vocational Education and Training in Switzerland 2008. Facts and Figures*. Federal Office for Professional Education and Technology (OPET). Bern.
- Pollard, E. L. and P. D. Lee. 2003. Child well-being: A systematic review of the literature. *Social Indicators Research*, 61: 59–78.
- Raab, Erich. 2003. «Wie (benachteiligte) Jugendliche ihre berufliche Zukunft sehen.» In Lothar Lappe (Eds.), *Fehlstart in den Beruf: Jugendliche mit Schwierigkeiten beim Einstieg ins Arbeitsleben*. Opladen: Leske + Budrich, DJI Verlag Deutsches Jugendinstitut.
- Ramseier, Erich and Christian Brühwiler. 2003. Herkunft, Leistung und Bildungschancen im gegliederten Bildungssystem: Vertiefte PISA-Analyse unter Einbezug der kognitiven Grundfähigkeiten. *Schweizerische Zeitschrift für Bildungswissenschaften*, 25(1): 23–58.
- Rosenberg, Morris. 1979. *Conceiving the Self*. New York: Basic Books, Inc.
- Royston, Patrick. 2004. Multiple imputation of missing values. *The Stata Journal*, 4(3): 227–241.
- Salmera-Aro, Katariina and Heta Tuominen-Soini. 2009. *Adolescents' Life Satisfaction During the Transition to Post-Comprehensive Education: Antecedents and Consequences. Research Paper*. Springer Netherlands.
- Sandmeier, Anita. 2005. Selbstwertentwicklung vom Jugendalter bis ins frühe Erwachsenenalter – eine geschlechtsspezifische Analyse. *Zeitschrift für Soziologie der Erziehung und Sozialisation*, 25(1): 52–66.
- Schelsky, Helmut. 1957. «Soziologische Bemerkungen zur Rolle der Schule in unserer Gesellschaft.» In Helmut Schelsky (Ed.), *Schule und Erziehung in der industriellen Gesellschaft*. Würzburg: Werkbund-Verlag.
- Schräder-Naef, Regula and Ruedi Jörg-Fromm. 2004. *Wie wirkt sich der nachgeholtte Lehrabschluss aus? Auswirkungen der Nachholbildung auf die berufliche Weiterentwicklung der Absolventinnen und Absolventen am Beispiel des Lehrabschlusses nach Artikel 41.1 BBG. Synthesis 9*. Nationales Forschungsprogramm 43 «Bildung und Beschäftigung». Bern/Aarau.
- Seiffge-Krenke, Inge and Tim Gelhaar. 2006. Entwicklungsregulation im jungen Erwachsenenalter. Zwischen Partnerschaft, Berufseinstieg und der Gründung eines eigenen Haushalts. *Zeitschrift für Entwicklungspsychologie und Pädagogische Psychologie*, 1/2006: 18–31.
- Semmer, N. K., F. Tschan, A. Elfering, W. Kälin, and S. Grebner. 2005. «Young Adults Entering the Workforce in Switzerland: Working Conditions and Well-Being.» In H. Kriesi, P. Farago, M. Kohli, and M. Zarin-Nejadan (Eds.), *Contemporary Switzerland*. New York: Palgrave Macmillan.
- Solga, Heike. 2002. *Ausbildungslose und ihre soziale Ausgrenzung. Selbständige Nachwuchsgruppe. Ausbildungslosigkeit: Bedingungen und Folgen mangelnder Berufsausbildung. Working Paper 4/2002*. Berlin: Max-Planck-Institut für Bildungsforschung.
- Stalder, Barbara E., Thomas Meyer, and Sandra Hupka. 2008. Leistungsschwach – Bildungsarm? PISA-Kompetenzen als Prädiktoren für nachobligatorische Bildungschancen. *Die Deutsche Schule*, 100(4): 436–448.
- TREE (Eds.). 2008. *Projekt-Dokumentation 2000–2007*. Bern/Basel: TREE (Transitionen von der Erstausbildung ins Erwerbsleben).
- Triandis, Harry Charalambos. 1995. *Individualism and Collectivism*. Westview Press: Boulder, CO.

- Troltsch, Klaus. 2000. «Jugendliche ohne abgeschlossene Berufsausbildung – Struktur- und Biographiemerkmale.» In Bundesinstitut für Berufsbildung (Eds.), *Ausbildungschancen Jugendlicher ausländischer Herkunft. Ergebnisse, Veröffentlichungen und Materialien aus dem BIBB. Stand: Mai 2000*. Bonn.
- Trzesniewski, Kali H., M. Brent Donnellan, and Richard W. Robins. 2003. Stability of Self-Esteem Across the Life Span. *Journal of Personality and Social Psychology*, 84(1): 205–220.
- UNESCO. 1997. *International Standard Classification of Education ISCED 1997*. o.O.
- Walter-Wydler, Emil. 1997. *Regionale Lebensqualität in der Schweiz. Ergebnisse der Rekrutenbefragungen 1996, 1987 und 1978*. Frankfurt am Main: Sauerländer.
- Wessel, Anne, Gabi Classen, and Sandra Hupka. 1999. «Zur Planung von Bildungskarrieren in den Neuen Bundesländern.» In Hans Merckens and Anne Wessel (Eds.), *Schulentwicklung in den Neuen Bundesländern. Ergebnisse aus der an der Freien Universität Berlin und der Humboldt-Universität zu Berlin eingereichten DGF-Forschergruppe*. Berlin: Freie Universität Berlin.

7 Appendix

Table 1 Critical ratios for differences of correlation of self-esteem between and within different intergenerational transfer of educational attainment groups

	successful ITEA						unsuccessful ITEA, educational downward mobility						unsuccessful ITEA						successful ITEA, educational upward mobility											
	t1>t2	t2>t3	t3>t4	t4>t5	t5>t6	t6>t7	t1>t2	t2>t3	t3>t4	t4>t5	t5>t6	t6>t7	t1>t2	t2>t3	t3>t4	t4>t5	t5>t6	t6>t7	t1>t2	t2>t3	t3>t4	t4>t5	t5>t6	t6>t7	t1>t2	t2>t3	t3>t4	t4>t5	t5>t6	t6>t7
Successful ITEA																														
t1>t2	0																													
t2>t3	-1.80	0																												
t3>t4	1.42	3.12*	0																											
t4>t5	-1.12	1.02	-2.38*	0																										
t5>t6	1.03	3.23*	-0.42	2.01*	0																									
t6>t7	-0.45	1.74	-2.00*	0.75	-1.41	0																								
Unsuccessful ITEA, educational downward mobility																														
t1>t2	1.79	0.85	2.95*	7.75*	6.62*	1.76	0																							
t2>t3	0.68	-0.40	1.66	6.80*	5.53*	0.76	0.72	0																						
t3>t4	2.71*	1.83	4.08*	9.20*	7.94*	2.58*	-0.54	-1.40	0																					
t4>t5	1.19	0.15	2.30*	7.60*	6.27*	1.21	-3.08*	-4.42*	-3.01*	0																				
t5>t6	2.47*	1.56	3.82*	9.04*	7.74*	2.36*	-2.68*	-3.89*	-2.56*	0.40	0																			
t6>t7	1.59	0.59	2.78*	8.12*	6.77*	1.56	-0.12	-0.90	0.36	2.60*	2.14*	0																		
Unsuccessful ITEA																														
t1>t2	-3.83*	-2.31*	-5.28*	-3.16*	-5.00*	-3.77*	-0.64	-1.77	-0.04	3.98*	3.17*	-0.42	0																	
t2>t3	-3.13*	-1.45	-4.63*	-2.35*	-4.32*	-3.00*	-0.12	-1.23	0.62	5.03*	4.07*	0.05	0.76	0																
t3>t4	-0.69	1.29	-2.15*	0.39	-1.77	-0.30	1.37	0.38	2.46*	7.28*	6.14*	1.38	3.22*	2.27*	0															
t4>t5	-4.52*	-2.96*	-6.14*	-3.94*	-5.88*	-4.61*	-0.78	-1.99*	-0.19	4.34*	3.34*	-0.54	-0.21	-1.21	-3.60*	0														
t5>t6	-3.75*	-2.07*	-5.33*	-3.03*	-5.04*	-3.72*	-0.37	-1.53	0.33	4.96*	3.91*	-0.17	0.50	-0.45	-3.10*	0.76	0													
t6>t7	-3.58*	-1.96*	-5.08*	-2.86*	-4.79*	-3.51*	-0.39	-1.52	0.29	4.61*	3.68*	-0.19	0.43	-0.47	-2.97*	0.72	-0.04	0												

Continuation of Table 1 on the next page.

Continuation of Table 1.

successful ITEA					unsuccessful ITEA, educational downward mobility					unsuccessful ITEA					successful ITEA, educational upward mobility									
t1>t2	t2>t3	t3>t4	t4>t5	t5>t6	t6>t7	t1>t2	t2>t3	t3>t4	t4>t5	t5>t6	t6>t7	t1>t2	t2>t3	t3>t4	t4>t5	t5>t6	t6>t7	t1>t2	t2>t3	t3>t4	t4>t5	t5>t6	t6>t7	
Successful ITEA, educational upward mobility																								
t1>t2	-1.59	0.42	-3.14*	-0.55	-2.78*	-1.28	0.89	-0.16	1.91	6.97*	5.74*	0.95	2.62*	1.79	-0.88	3.28*	2.41*	2.29*	0					
t2>t3	-0.95	1.03	-2.43*	0.11	-2.06*	-0.58	1.23	0.22	2.28*	7.14*	5.99*	1.24	3.04*	2.27*	-0.26	3.68*	2.88*	2.74*	0.76	0				
t3>t4	-1.32	0.74	-2.88*	-0.24	-2.51*	-0.98	1.06	0.02	2.12*	7.29*	6.01*	1.10	2.91*	2.09*	-0.60	3.62*	2.74*	2.59*	3.22*	2.27*	0			
t4>t5	-0.39	1.82	-1.94	0.83	-1.54	0.07	1.63	0.63	2.83*	8.22*	6.85*	1.60	3.85*	3.08*	0.37	4.71*	3.81*	3.59*	-0.21	-1.21	-3.60*	0		
t5>t6	-0.97	1.19	-2.55*	0.18	-2.16*	-0.58	1.29	0.26	2.43*	7.79*	6.43*	1.30	3.34*	2.53*	-0.22	4.15*	3.23*	3.04*	0.50	-0.45	-3.10*	0.76	0	
t6>t7	-1.32	0.76	-2.89*	-0.23	-2.52*	-0.98	1.07	0.02	2.14*	7.37*	6.07*	1.10	2.95*	2.12*	-0.59	3.68*	2.79*	2.63*	0.43	-0.47	-2.97*	0.72	-0.04	0

Note: Absolute values greater than or equal to 1.96 indicate a significant difference ($p < 0.05$).

Table 2 Critical ratios for differences of correlation of positive attitude between and within different intergenerational transfer of educational attainment groups.

	Successful ITEA					Unsuccessful ITEA, educational downward mobility					Unsuccessful ITEA					Successful ITEA, educational upward mobility								
	t1>t2	t2>t3	t3>t4	t4>t5	t5>t6	t6>t7	t1>t2	t2>t3	t3>t4	t4>t5	t5>t6	t6>t7	t1>t2	t2>t3	t3>t4	t4>t5	t5>t6	t6>t7	t1>t2	t2>t3	t3>t4	t4>t5	t5>t6	t6>t7
Successful ITEA																								
t1>t2	0																							
t2>t3	-2.25*	0																						
t3>t4	2.95*	4.62*	0																					
t4>t5	0.08	2.68*	-2.70*	0																				
t5>t6	0.03	2.73*	-3.08*	-0.05	0																			
t6>t7	1.76	4.55*	-1.53	1.79	1.66	0																		
Unsuccessful ITEA, educational downward mobility																								
t1>t2	-3.58*	6.47*	-0.86	1.91	4.64*	1.43	0																	
t2>t3	-4.68*	4.52*	-2.39*	0.12	2.91*	-0.02	-6.18*	0																
t3>t4	-1.98*	8.56*	1.23	4.19*	6.75*	3.37*	-2.68*	4.43*	0															
t4>t5	-3.58*	6.88*	-0.83	2.03*	4.86*	1.50	-4.40*	3.01*	-2.01*	0														
t5>t6	-3.61*	6.96*	-0.87	2.01*	4.88*	1.48	-5.83*	0.58	-4.08*	-2.07*	0													
t6>t7	-2.84*	8.63*	0.22	3.34*	6.25*	2.55*	-4.03*	2.54*	-1.81	0.10	1.83	0												
Unsuccessful ITEA																								
t1>t2	-3.33*	-0.88	-5.99*	-3.61*	-3.64*	-5.51*	-5.02*	3.83*	-2.88*	-0.47	2.33*	-0.48	0											
t2>t3	-5.72*	-3.49*	-8.01*	-6.19*	-6.28*	-8.16*	-5.94*	1.61	-4.22*	-2.15*	0.59	-1.78	-2.46*	0										
t3>t4	2.57*	4.84*	-0.34	2.59*	2.66*	1.14	-2.17*	8.17*	0.97	3.87*	6.41*	3.11*	5.55*	6.87*	0									
t4>t5	-5.33*	-3.12*	-7.66*	-5.74*	-5.81*	-7.63*	-5.83*	1.73	-4.06*	-1.97*	0.72	-1.65	-2.33*	0.22	-6.82*	0								
t5>t6	-5.26*	-3.02*	-7.61*	-5.68*	-5.75*	-7.60*	-5.79*	1.90	-4.00*	-1.88	0.83	-1.58	-2.20*	0.39	-7.20*	0.15	0							
t6>t7	-2.36*	0.08	-5.10*	-2.57*	-2.57*	-4.38*	-4.63*	4.50*	-2.33*	0.18	2.93*	0.03	0.94	3.46*	-4.71*	3.11*	2.84*	0						

Continuation of Table 2 on the next page.

Continuation of Table 2.

Successful ITEA						Unsuccessful ITEA, educational downward mobility						Unsuccessful ITEA						Successful ITEA, educational upward mobility						
t1>t2	t2>t3	t3>t4	t4>t5	t5>t6	t6>t7	t1>t2	t2>t3	t3>t4	t4>t5	t5>t6	t6>t7	t1>t2	t2>t3	t3>t4	t4>t5	t5>t6	t6>t7	t1>t2	t2>t3	t3>t4	t4>t5	t5>t6	t6>t7	
successful ITEA, educational upward mobility																								
t1>t2	0.98	3.44*	-2.01*	0.95	1.01	-0.68	-3.10*	7.22*	-0.21	2.65*	5.35*	2.04*	4.26*	6.56*	-1.64	6.16*	6.11*	3.30*	0					
t2>t3	-4.56*	-2.16*	-7.06*	-4.96*	-5.02*	-6.94*	-5.48*	2.87*	-3.55*	-1.28	1.53	-1.11	-1.29	1.48	-6.64*	1.18	1.03	-2.19*	-5.07*	0				
t3>t4	0.35	3.05*	-2.78*	0.28	0.34	-1.52	-3.47*	7.26*	-0.67	2.25*	5.12*	1.67	3.98*	6.62*	-2.38*	6.14*	6.08*	2.90*	-0.70	4.87*	0			
t4>t5	-1.36	1.37	-4.35*	-1.53	-1.51	-3.45*	-4.21*	5.99*	-1.71	1.04	3.96*	0.70	2.34*	5.17*	-3.94*	4.69*	4.62*	1.25	-2.40*	3.78*	-1.68	0		
t5>t6	0.11	2.90*	-3.06*	0.03	0.08	-1.84	-3.60*	7.27*	-0.83	2.10*	5.03*	1.54	3.87*	6.64*	-2.65*	6.12*	6.07*	2.74*	-0.96	5.30*	-0.27	1.48	0	
t6>t7	0.23	3.04*	-2.95*	0.16	0.22	-1.70	-3.55*	7.40*	-0.75	2.20*	5.14*	1.62	4.01*	6.80*	-2.55*	6.27*	6.22*	2.88*	-0.84	5.47*	-0.14	1.80	0.13	0

Note: Absolute values greater than or equal to 1.96 indicate a significant difference ($p < 0.05$).