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Pfeffer, Fabian T.; Hällsten, Martin

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Mobility regimes and parental wealth: The United States, Germany, and Sweden in comparison

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Fabian T. Pfeffer and Martin Hällsten



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Contact: Uta Rahmann | soeppapers@diw.de

MOBILITY REGIMES AND PARENTAL WEALTH: THE UNITED STATES, GERMANY, AND SWEDEN IN COMPARISON

Fabian T. Pfeffer*
Institute for Social Research
University of Michigan

Martin Hällsten Swedish Institute for Social Research Stockholm University

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Abstract

We study the role of parental wealth for children's educational and occupational outcomes across three types of welfare states and outline a theoretical model that assumes parental wealth to impact offspring's attainment through two mechanisms, wealth's purchasing function and its insurance function. We argue that welfare states can limit the purchasing function of wealth, for instance by providing free education and generous social benefits, yet none of the welfare states examined here provides a functional equivalent to the insurance against adverse outcomes afforded by parental wealth. Our empirical evidence of substantial associations between parental wealth and children's educational success and social mobility in three nations that are marked by large institutional differences is in line with this interpretation and helps us re-examine and extend existing typologies of mobility regimes.

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Introduction

A central question in sociology is the extent to which individuals' life chances depend on their social background. A long-standing strand of sociological research on social mobility has described the intergenerational transfer of advantage along various dimensions of socioeconomic standing and assessed the extent to which it may be shaped by institutional contexts. At times, the debate on cross-national differences in mobility patterns, mobility levels, and mobility trends has been lively (Lipset and Zetterberg 1959; Featherman et al. 1975; Grusky and Hauser 1984; Treiman and Yip 1989; Erikson and Goldthorpe 1992; Breen 2005). Social mobility processes are complex and cannot be captured by a single measure of social background: social class, status, education, income, and more recently, wealth have all been shown to provide partially independent routes for the transfer of advantage and disadvantage across generations. Increasingly, sociologists are interested in going beyond the description of intergenerational associations in socioeconomic standing to uncover both the micro-level mechanisms and institutional factors at play in shaping the transmission of status across these various dimensions (Ganzeboom et al. 1991; Kerckhoff 1995; Shavit and Müller 1998; Shavit et al. 2007; Beller and Hout 2006).

We submit that the explanation of cross-national differences in intergenerational mobility would greatly benefit from a unified theoretical framework to conceptualize the relationship between national institutional arrangements and mobility outcomes. DiPrete (2002) has begun to develop such a framework by providing a parsimonious taxonomy of mobility regimes based on shared patterns of intragenerational social mobility. We expand DiPrete's theoretical framework to include intergenerational mobility processes. To that aim, we reconsider the central role of different forms of insurance against negative mobility outcomes during the status attainment process. Most important, we argue that the comparative assessment of social mobility should also consider forms of private insurance that may be at play in addition to or in lieu of public insurance schemes. We propose that the most effective form of private insurance is provided by family wealth and show how monetary wealth facilitates intergenerational mobility in systems with fundamentally different public insurance schemes - namely in the United States, Germany, and Sweden. Our assessment of the role of wealth in shaping mobility opportunities in these different institutional contexts complicates existing classifications of mobility regimes and at the same time adds strength to a theory of mobility regimes that puts different types of insurance mechanisms against mobility risks at its center. Our framework also contributes to the emerging literature on wealth and its social implications in times of rising wealth inequality around the globe (Wolff 2006; Davies 2008, 2009).

Our theoretical argument is presented in three steps: The first section discusses existing welfare state and mobility regime typologies and the central role they give to the extent of social insurance against adverse outcomes. We show that this analytic focus on the role of insurance for processes of labor market mobility can also fruitfully be extended the study of intergenerational mobility processes. The next section builds our main argument according to which insurance against negative outcomes of intergenerational mobility can be met by parental wealth. The following section describes the relevant institutional contexts of the status attainment process for the three nations studied here, and argues that effective social insurance schemes against the risks involved in intergenerational mobility are lacking in all three cases. While the extent to which economic assets may purchase access to attainment opportunities depends on specific institutional features, the insurance function of wealth appears to be universal. Our empirical work adds credibility to this claim by comparing parental wealth's relationship with offspring's educational outcomes, occupational destinations, and intergenerational social mobility across three types of welfare states.

Mobility Regimes: The Role of Insurance

The availability of public insurance against the social risks associated with major life-course events - such as unemployment, child-bearing, or sickness - is a central aspect of modern welfare states and an important building block of comparative typologies of welfare regimes (Esping-Andersen 1990, 1998). The availability of insurance against social risks also plays an important role in DiPrete's (2002) proposal for a comparative typology of mobility regimes. DiPrete's point of departure is that intergenerational mobility analyses suffer from the erroneous assumption of stability of social positions throughout adulthood, which contrasts with the sometimes large volatility of employment and earnings in many nations. Welfare states enter into this process by providing various types of insurance that affect the course of *intra*generational mobility – that is, labor market careers. DiPrete distinguishes nations according to the incentives they set for mobility-generating events – such as union dissolution or unemployment – as well as "the extent to which they mitigate the consequences of these events through social insurance" (p. 267). In his study, Sweden emerges as an "insurancebased mobility regime," the United States as one in which publicly provided social insurance is least central, and Germany occupies a middle position. It may not be surprising that these three empirical representations of different mobility regimes coincide with those of different welfare regimes – Sweden as the model case of the Nordic social-democratic welfare state, the United States as the classical Anglo-Saxon liberal model, and Germany representing the Continental-European conservative welfare model (Esping-Andersen 1990). As suggested above, the two typologies share a common theoretical building block: the availability of social insurance against risks. However, while social insurance is only one of several aspects in Esping-Andersen's welfare state typology – in the form of decommodification as income replacement – it is given a more central place in the work targeted at understanding

intragenerational mobility. Over the years, DiPrete and collaborators (DiPrete and McManus 1996; DiPrete et al. 1997; DiPrete and McManus 2000; DiPrete et al. 2001) developed a framework to analyze welfare states according to their influence on labor market mobility, which culminated in the mobility regime typology mentioned earlier (DiPrete 2002). This theoretical framework has been an important foundation for further comparative work on the differential consequences of adverse life events within generations in different mobility regimes. For instance, Gangl's (2004) work on the consequences of unemployment spells for future career trajectories shows that relatively generous unemployment benefits in Germany provide a safety net for continued growth in occupational status while, in the United States, the absence of a strong unemployment insurance system leads to larger scarring effects of unemployment in terms of subsequent earnings.

We propose a theoretical approach to the comparative study of *intergenerational* mobility that, like DiPrete's classification of *intragenerational* mobility regimes, relies on an examination of the role of insurance. For the intragenerational case, the major mobility-inducing events are those related to labor market disruptions (unemployment, income loss, retirement, etc.) and demographic events (child-bearing, divorce, etc.). For the intergenerational case, the main mobility-inducing events are those structuring educational careers (entry, graduation, and drop-out) and labor market entry (school-to-work transitions). In addition, to the extent that individuals are forward-looking actors, early decision-making on educational and occupational careers is also shaped by life-course risks associated with later labor market positions, such as unemployment risks and risks for social marginalization (e.g., Breen and Goldthorpe 1997; Cameron and Heckman 1998; Morgan 2005). While many other aspects affect the intergenerational reproduction of advantage – such as, early health outcomes or family formation processes – we choose to focus on those typically acknowledged as the linchpins of the transmission of socioeconomic outcomes: educational and occupational success.

Our institutional explanation of intergenerational mobility patterns is geared to investigating the potential role of insurance in educational careers and early occupational attainment. We choose the three classic representatives of different welfare and mobility regimes, the United States, Germany, and Sweden, to investigate how education systems and labor market institutions may or may not buffer children and young adults against social risks involved in educational and early occupational careers. While we depart from the exclusive focus on labor market institutions that is often criticized to limit welfare state research (Hall and Soskice 2001) we share another important conceptual departure point with the work discussed above. Much like Esping-Andersen (1998: p. 36), who considers "the household as the ultimate destination of welfare consumption and allocation[,...] the unit 'at risk'," and DiPrete (2002: p. 268), who argues that "an adequate theoretical treatment of national mobility regimes must be conceptualized and operationalized in terms of the life conditions of the individual's

household", we too conceptualize the household as the preferred level of analysis for comparative mobility research. In fact, for the analysis of intergenerational mobility, we necessarily rely on a household concept that includes offspring as members of the household and family unit.

Why should the consideration of insurance also figure centrally in comparative studies of intergenerational mobility? The need for insurance against negative outcomes of intergenerational mobility processes first and foremost depends on the extent of risk involved in educational careers. We argue that risk is a universal characteristic of any educational career (or any type of attainment trajectory, for that matter). The insight that risk is a central feature of human capital investments is of course a basic pillar of economic models of educational attainment (Altonji 1993; Manski 1993). In sociology, it was Breen and Goldthorpe who pointed out that "[r]emaining at school and failing increases the chances of entering the underclass. This means that there is a risk involved in choosing to continue to the next educational level" (1997: p. 282). The concrete risks posed by the failure to complete a specific degree, perhaps less drastic than the immediate relegation to an "underclass," include the lack of a credential that could make up for the opportunity costs of educational participation (e.g., foregone earnings), the possible labor market penalty associated with the stigma of failure, and the psychological consequences of failure. Insurance that provides a safety net to mitigate the impact of possible failure may change the educational decision-making process.

For the case of labor market mobility, research has shown that when welfare states "absorb risks, the satisfaction of need is 'de-familialized' (taken out of the family)" (Esping-Andersen 1998: p.40). But can the risk of educational failure be 'de-familialized'? Welfare states may reduce life-course risks by providing social insurance, yet the uncertainty involved in educational decision-making constitutes a risk that is largely closed to social intervention. As we will discuss in detail below, the education system of none of our three comparative cases provides insurance mechanisms that would successfully 'de-familialize' these intergenerational risks, nor do we expect that any alternative institutional design can realistically be expected to do so.

The next section develops our main argument that the need for insurance against the risks faced in the status attainment process can be met by parental wealth. Parental wealth may offer a form of *private insurance* that serves as a functional substitute for missing or inadequate public insurance schemes for intergenerational mobility processes². While DiPrete's typology of mobility regimes

¹A distinction in economics, which does not further concern us here, is that between uncertainty and risk depending on whether the probabilities of failure are known or not. However, as Mas-Colell et al. (1995: p. 207) point out, uncertainty can in principle only be identified where these probabilities are objectively given, which is not the case for educational careers.

²Similarly, and in reference to Esping-Andersen's work, Morillas (2007) suggests that parental wealth may serve as a means to "private de-commodification". We avoid this term because i) in Esping-Andersen's framework, de-commodification describes the extent to which economic well-being is decoupled from labor market outcomes and encompasses more aspects than the level of social insurance (namely, rules of access to and range of benefits provided; Esping-Andersen 1990: pp. 47ff), ii) while de-commodification describes the shift of risks between the market and the state, in later work (Esping-Andersen 1998), introduces the term "de-familialization" to refer to risk shifts between the

is based on the "societal mechanisms that mitigate the socioeconomic consequences [of mobility-generating events] through some form of social insurance" (p. 268), we hypothesize that a selected family-level characteristic, namely parental wealth, mitigates the socioeconomic consequences of intergenerational mobility-generating events through some form of private insurance. We next detail why we consider wealth to play an important role in buffering the risks involved in educational and early occupational careers more so than any other component of families' socioeconomic position.

PARENTAL WEALTH AS PRIVATE INSURANCE

Inequality in the distribution of economic assets is intense. In many industrialized nations, the wealthiest 20 percent of families hold more than 80 percent of all economic wealth (Wolff 2006; Jäntti et al. 2008). Naturally, there is cause for concern that this stark inequality in one generation translates into unequal opportunities for the next generation. Following early work on the role of wealth in the process of intergenerational status transmission (Henretta and Campbell 1978; Campbell and Henretta 1980; Rumberger 1983), recent research has convincingly documented that parental assets constitute an important dimension of inequality in opportunities in the United States. Researchers from a variety of disciplines have documented a strong association between parental wealth and children's educational achievement and attainment (Axinn et al. 1997; Conley 2001; Morgan and Kim 2006; Haveman and Wilson 2007; Williams Shanks 2007; Belley and Lochner 2007). Particular attention has also been directed to the role of wealth in explaining racial gaps in children's attainment and early life outcomes (Oliver and Shapiro 1997; Conley 1999; Orr 2003; Yeung and Conley 2008). Fewer empirical contributions have studied and detected associations between the wealth position of families and the labor market outcomes of young adults, such as earnings (Morillas 2007) and their likelihood of self-employment (Fairlie and Robb 2008; Fairlie and Krashinsky 2009). For countries other than the United States, the assessment of the relationship between parental wealth and children's educational and early labor market success has been largely restricted to late-industrializing countries. Torche and collaborators (Torche and Spilerman 2006, 2009; Torche and Costa-Ribeiro 2012) have found that parental wealth plays an important role in Mexico, Chile, and Brazil, where they documented strong effects of parents' asset ownership on several indicators of offspring's economic well-being.³

The literature suggests a number of mechanisms through which wealth may influence children's opportunities. We group them into two broad categories: those mechanisms referring to the *purchasing*

family and the state. In this sense, "lacking de-familialization" would be the more accurate term for the processes studied here. In general, however, we prefer the generic term private insurance since it provides a more direct connection to the mobility regimes typology.

³We should note that a few contributions have also demonstrated the importance of parental wealth for the living standards of adults, such as their own home ownership, in industrialized countries (e.g. Spilerman 2004 for Israel; Spilerman and Wolff 2012 for France). In this contribution, we are concerned with earlier life course stages and different aspects of the socioeconomic attainment process, namely educational and early occupational attainment.

function of parental wealth and, of special importance for this contribution, those referring to the insurance function. According to the purchasing function, parental wealth provides the necessary monetary resources that fund access to important educational resources. This function might be most evident for the access to costly higher education in the United States and many late-industrializing countries with high tuition costs. Although a long-standing theory in economics hypothesizes the existence of credit constraints for college access, the early insight that credit constraints might depend in particular on parental wealth rather than solely parental income (Becker and Tomes 1986) has only recently been subjected to direct empirical assessment (Belley and Lochner 2007; Lovenheim 2011). In many cases, the purchasing function of wealth implies a direct monetary transfer from parents to their young adult children. These intergenerational transfers to young adults have been observed in many nations (Schoeni and Ross 2005; Attias-Donfut et al. 2005; Albertini et al. 2009) and have been shown to be closely tied to parents' wealth position (Zissimopoulus and Smith 2011). The purchasing function of parental wealth may, however, also emerge at earlier stages of the educational attainment process and in the absence of intergenerational transfers. That is, parental wealth, and especially housing wealth, may purchase access to neighborhoods and schools that positively influence children's educational outcomes (Haurin et al. 2002), particularly in the context of high and increasing levels of socioeconomic segregation of neighborhoods and schools (Orfield and Eaton 1996; Reardon and Bischoff 2011). Housing wealth may also provide home environments that are generally more conducive to children's development (Solari and Mare 2012).

Without negating the potential importance of the purchasing function, the conceptual focus of this contribution is on the insurance function of parental wealth. We not only believe that the latter is the most fruitful explanatory framework for studying the relationship between parents' wealth and their children's early attainment outcomes but, as discussed above, we consider it the most promising approach to a cross-national comparison of intergenerational mobility regimes. We define the insurance function of wealth as its *potential* to buffer the socioeconomic and sociopsychological consequences of negative outcomes in children's and young adults' early attainment processes. We posit that the children who are able to fall back on their parents' wealth when, for example, they drop out of college or experience a prolonged school-to-work transition period, or have early episodes of unemployment, are more likely to opt for long-term human capital investments, such as college attendance, or choose particularly competitive or protracted career paths that they may be able to sustain even in the face of early set-backs⁴. As part of his ethnographic inquiry into the social significance of wealth, Shapiro

⁴We also acknowledge the possibility of a different kind of wealth effect on occupational outcomes that may counterweight the hypothesized positive effects: Parental wealth may support educational investments with returns that are not primarily monetary. While individuals from advantaged socioeconomic backgrounds generally favor the most prestigious fields of tertiary study, they are, for example, also overrepresented in art schools and therefore faced with a labor market that is highly volatile but provides low average income returns. While this phenomenon may indeed weaken the hypothesized positive association between wealth and occupational outcomes, it should not be prevalent enough

(2004) similarly argued that parental wealth provides "important real and psychological safety nets" for children. This perspective resonates well with what Spilerman (2000) suggested as the preferred conceptual approach to the study of wealth for sociological stratification research: wealth as the foundation not necessarily of a specific consumption pattern but a specific "consumption potential," which individuals can draw on – and, as we would add, pass on to their children – if and when needed (in which case, it enables "consumption smoothing"). It is this aspect of wealth that distinguishes it from the socioeconomic characteristics typically studied in stratification research, namely occupational status, education, and income (Spilerman 2000: p. 500). Finally, the view that wealth ownership produces important behavioral effects that are generated by no other aspect of socioeconomic status coincides with the beliefs of a growing number of advocates of asset-building policies. As Sherraden (1991) famously formulated, "income feeds peoples' stomachs, assets change their minds."

Based on its insurance function, then, parental wealth is expected to carry behavioral implications, namely influence on educational and occupational choice, even in the absence of its actual use as a buffer in situations of educational failure or early labor market adversity. In this sense, the exclusive focus on intergenerational transfers to identify intergenerational wealth effects necessarily fails to capture the full impact of parental wealth on children's educational and early occupational careers. The insurance mechanism, however, corresponds to a broader understanding of wealth as a determinant of "life chances," an aspect of economic wealth that has been stressed in asset-based concepts of social class (Sørensen 2000; 2005).

To isolate the effects of parental wealth from other confounding factors in our empirical models, we include controls for the standard pillars of socioeconomic background: parental education, parental occupational status, and family income. Obviously, highly educated, high-earning and high-status parents also have higher wealth. A long tradition of stratification research has established that different aspects of social background cannot be exchanged for one another since they uniquely contribute to children's life chances (Sewell and Hauser, 1975; Featherman and Hauser, 1977; Goldthorpe and Bukodi, 2012). We consider parental wealth to be the background characteristic that is most directly tied to insurance effects. In terms of future access to parents' monetary resources, parental income may be able to provide some insurance effects (particularly at the very top of the distribution), but because income streams can stop abruptly, parental income provides a much riskier foundation for long-term calculations about the availability of economic resources. Occupational status, on the other hand, may also exert some of its intergenerational effects through the provision of insurance in the form of occupational contacts and opportunities that facilitate labor market access. But because this type of insurance mechanism is necessarily specific to an occupational field it fails to provide generic insurance

to affect the overall direction of this relationship. In addition, this counterveiling mechanism might be particularly applicable to the very top of the wealth distribution, which survey studies of wealth typically fail to capture.

across a wide array of educational and occupational choices. The case for parental education as an insurance mechanism seems least convincing. Instead, parental education is more directly linked to intellectually enriching environments as well as important information advantages for the planning of children's educational careers. In short, including measures of socioeconomic background in addition to parental wealth will likely capture different social mechanisms underlying the intergenerational transmission of status. By investigating conditional wealth effects we therefore also partly purge them from wealth functions other than those operating through the purchasing or insurance channels, such as those arising from wealth's association with different intellectual environments (more directly captured by parental education) or with the availability of social networks that facilitate access to occupational positions (more directly captured by parental occupations).

Considerations of unobserved bias

We hypothesize that the insurance function of wealth is a feasible explanation of the cross-national evidence on intergenerational wealth associations reported here. We do not, however, provide a direct empirical assessment of this mechanism. Such an assessment is challenging not only because of the lack of a clear empirical approximation – as measures of transfers may provide for a large part of wealth's purchasing function – but also because of the potential impact of unobserved parental characteristics that could contribute to the intergenerational associations observed here. Classical behavioral models in economics suggest a variety of factors that may drive individuals' wealth accumulation, which in the neo-classical world of perfect credit markets is viewed simply as delayed consumption arising from differential savings propensities. The latter may, for instance, be driven by differential discount rates (that is, orientations towards the future), levels of risk aversion, or altruistic preferences for bequeathing one's offspring (see also Becker and Tomes 1986). For these unobserved – and potentially unobservable – characteristics to drive the intergenerational associations studied here, they would need to determine not only parents' wealth position but also their offspring's attainment. Whether this possibility is a convincing alternative explanation for the intergenerational association between wealth and children's outcomes depends on a variety of factors. First, these unobserved characteristics may determine savings propensities but savings behaviors are not necessarily a good predictor of a families' wealth position. We know that the largest part of families' net worth is not accumulated within one generation through savings and investments but passed on through bequests and inter-vivo transfers (although the empirical estimates of just how much wealth transfers account for families' total wealth vary considerably [Kotlikoff and Summers 1981; Modigliani 1988]). Second, for these unobservable characteristics to upwardly bias the estimates of intergenerational wealth effects they need to impact parents' wealth and children's outcomes in the same direction. For some characteristics that may be

less convincing than for others. For instance, risk aversion – which would appear to be a particular challenge in the context of a conceptual framework that puts much weight on the inherent risks in educational careers – may not fulfill this requirement. In our view, risk-averse families are more likely to accumulate wealth and we expect risk averse parents and children to be less willing to invest in long educational and risky occupational careers (see also Belzil and Leonardi 2007; 2009). Third, if parents' unobserved characteristics influence educational decision-making and account for differences in educational and occupational outcomes of their children, it seems reasonable to assume that they also account for their own educational and occupational outcomes, which we observe and control for in our models. In other words, controls for parents' own educational and occupational outcomes should capture a large part of those unobserved characteristics assumed to be relevant for the educational and occupational outcomes of their children.⁵

We have considered a number of arguments against the claim that the associations observed here may suffer from severe unobserved bias. But we can also refer to recent work that has found selected intergenerational wealth effects to be stable against unobserved bias (Torche and Costa-Ribeiro 2012; Spilerman and Wolff 2012; Elwert and Pfeffer 2012). While future research may aspire to add further credibility to the claim of a causal relationship between parental wealth and children's outcomes, we find the existing evidence encouraging enough to merit the advancement of a conceptual framework in which wealth is hypothesized to affect behavior instead of engaging in a prohibitive preoccupation with the possibility of the reverse. The unique strength of the sociological perspective lies in the focus on the social mechanisms behind such associations (Hedström and Swedberg 1998), and we posit the insurance function as a mechanism that may help orient future research on wealth and comparative studies of intergenerational mobility.

INSTITUTIONAL CONTEXTS AND WEALTH EFFECTS

In this section, we outline how selected features of the U.S., German, and Swedish education and welfare systems relate to the hypothesized purchasing and insurance functions of parental wealth. While our conceptual focus is on the insurance function, we also need to discuss how the purchasing function of wealth for children's attainment may differ across these contexts. It will become apparent that the latter shows greater cross-national differences than the former, which provides an important contrast for the interpretation of our empirical results. However, before embarking on a description of important institutional arrangements and their relationship to parental wealth in the three nations of this study, we should point out one important commonality between them: These three countries are

⁵Another necessary condition for the existence of unobserved bias arises if we consider children themselves rather than their parents the focal unit of decision-making (a point on which we remain agnostic), namely that these unobserved characteristics are transmitted across generations (for supporting evidence see Dohmen et al. (2012) on risk aversion and Gouskova et al. (2010) on future orientations).

marked by similarly high levels of wealth inequality (see Wolff 2006; Jäntti et al. 2008). It might be particularly notable that wealth inequality is no less intense in otherwise more egalitarian Sweden or Germany than in the United States. In fact, cross-national comparisons of the distribution of wealth in a number of industrialized countries show Sweden to suffer the greatest inequality on this dimension (Jäntti et al. 2008)⁶.

Relevant features of the education systems of the United States, Germany, and Sweden

In the United States, educational resources on the primary and secondary education level show drastic geographic variation. First and foremost, educational funding is to a large extent based on property taxes and thus directly tied to a neighborhood's average home values. Educational resources are of course not restricted to schools' economic revenue but also derive from the structure of social networks in these schools and the neighborhoods surrounding them (see Coleman et al. 1966). Socioeconomic segregation in U.S. neighborhoods and schools has grown increasingly pronounced over recent years (Orfield and Eaton 1996; Reardon and Bischoff 2011). Also, private education plays a larger role throughout all levels of the U.S. education system than it does in the German and Swedish systems. On the post-secondary level, the U.S. system is marked by generally high and ever rising tuition costs (College Board 2011). While need-based scholarships partly cover tuition and living costs, they fail to take into consideration important parts of students' wealth background. For instance, the 1992 Higher Education Act removed home ownership from the calculation of financial need.

The German school system is marked by an exceptional level of student differentiation (or, "institutional stratification"; see Allmendinger 1989): The selection of one of three secondary school types occurs at an early age (typically between ages 10 and 13) and is in many cases de facto irreversible. Only one school type, the *Gymnasium*, provides immediate qualification for university access. The two other main school types (although some states offer additional school forms), the *Realschule* and *Hauptschule*, typically lead to an apprenticeship, which prepares for skilled non-manual or manual labor, respectively. Entry into the highest track of the highly differentiated German education system is much less determined by residential choices than by parents' knowledge of and own prior success in navigating the complex pathways of the German system (Oswald et al. 1988; Pfeffer 2008; Hillmert and Jacob 2010). In other words, while the choice of a specific secondary school is also an important

⁶Of course, this fact reflects the interaction between a nation's welfare system and the distribution of private wealth: Both Sweden's and Germany's public pension scheme provide a more egalitarian wealth distribution than a simple look at individual asset holdings would suggest (see also Davies 2009). Using a measure of private wealth that fails to include pension entitlements is problematic for any study of economic well-being but weights less heavily in the context of this contribution. For the life course stages studied here, namely the early attainment outcomes of children, public wealth entitlements of parents can be assumed to be of minor importance due to the fact that they are ultimately inaccessible until much after the completion of the attainment process. To the extent that parents' foresight of future pension wealth may influence present-time decision-making we provide conservative estimates of wealth effects in Germany and Sweden.

strategy to secure educational opportunities in Germany, educational resources show less variation across different neighborhoods than across different school types within the same neighborhood. For those students who do graduate from *Gymnasium*, access to college is largely open (with the exception of some field-specific *numerus clausus* rules based on high school GPA) and free, although many German states have experimented with – that is, introduced and again abolished – comparatively low tuition fees over the last few years. Living costs are partly covered by a need-based aid system, which also fails to take into account parental wealth.

In Sweden, schooling is not only free at all levels but also nearly completely standardized and the complex pathways of the German type have been abolished since the 1950s. The nationally standardized curriculum means that school quality differs comparatively little across schools. Parents can only influence the composition of school peers via the choice of residential location. However, the comparatively egalitarian distribution of well-being in Sweden – with the exception of wealth, as discussed above – implies that the differences between advantaged and disadvantaged neighborhoods are much less intense than those found in the United States. All individuals follow a standardized curriculum until 9th grade (age 15), when they proceed to the voluntary upper-secondary school where they choose between academic and vocational tracks. The vocational tracks are general in character without the strong connection to the labor market typical for the German apprenticeship system. All academic tracks grant basic eligibility for tertiary education although many post-secondary programs - for instance, in the natural sciences - require specific high school coursework, such as mathematics and natural sciences. Enrollment at a voluntary upper-secondary school comes with a moderate "study benefit," which is paid out to parents until the child turns 18 and directly to students after that point. Admission to tertiary education is entirely based on a numerus clausus system, a merit selection system that is driven by supply and demand. Graduation from academic tracks is therefore not a guarantee for university admission. For higher education and other forms of post-secondary schooling, the government provides all adults up to their fifties with loans and grants, which provide the necessary means for covering living costs, although at a decidedly no-frills level (student grant income is less than half of median earnings).

The scope for wealth's purchasing and insurance function

The education system of the United States leaves ample room for the purchasing function of parental wealth. Educational resources in pre-tertiary public education are tightly linked to neighborhoods via localized school financing and the highly segregated nature of schools and neighborhoods. The United

⁷A quasi-market in the form of a publicly funded voucher system was introduced in the 1990s at both compulsory and upper secondary levels (see Björklund et al. 2005 for an overview of the consequences of these reforms), but the population we study here is influenced little by this reform.

States thus sets the clearest incentives for wealthy parents to select into preferable neighborhoods or alternatively to buy private education. On the post-secondary level, tuition costs play a central role in educational decision-making and credit constraints for college enrollment are likely although they continue to be widely debated in the empirical literature (see e.g. Cameron and Taber 2004; Belley and Lochner 2007; Lovenheim 2011). In contrast, the missing link between school funding and home values in Germany and the lower direct costs associated with attending tertiary education should make parents' wealth or equity-based lending a less consequential resource in Germany for children's education. Similarly, parental wealth should play a very restricted role at all levels of schooling in Sweden thanks to its strong system of publicly funded education, the great extent of geographic standardization, and tuition-free higher education. A prediction of the scope of wealth's purchasing function in these three institutional contexts is thus rather straightforward: We expect it to be less central in Germany and Sweden than in the United States.

This clear prediction of cross-national differences in the importance of wealth in regards to its purchasing function does, however, not extend to its insurance function: As we have argued earlier, risk is a universal feature of any educational career as is the need to insure against that risk. These risks merely take different forms in different education systems. For instance, risk in educational careers is partly defined by the degree of differentiation of the education system, that is, the extent, timing, and rigidity of student selection into different secondary school types and tracks (Hopper 1968; All mendinger 1989): In a highly differentiated system, such as that of Germany, different school types or tracks entail distinct educational pathways with limited possibilities for switching from one path to the other through track mobility or alternative, 'second-chance' routes. The failure to complete an educational pathway is thus most likely to entail a permanent loss of education and income in the highly differentiated education system of Germany. Risk is further increased in the German system due to the early selection into different school types: Traveling the long path to college completion is especially uncertain since the basic decision for the college track is typically made in fourth grade, with very limited information about children's academic abilities. In this regard, the German system entails higher levels of risk than more comprehensive systems, such as those of the United States and Sweden, which generally allow for more fluid patterns of track mobility and thereby less drastic and terminal responses to educational failure than drop-out. As one of the most comprehensive education systems of the industrialized world, the Swedish system is perhaps most open to smooth transitions to other tracks in the case of failure (Erikson and Jonsson 1996). In comparison to Sweden, the U.S. system is more complex and may incorporate higher risks than usually presumed: Arum and Hout (1998) point out that educational attainment in the United States is by no means as gradual or linear a process as is sometimes depicted, but instead characterized by an array of choices and constraints (Lucas 2001).

Next, we stress that participation in higher education necessarily entails opportunity costs independent of the direct costs of attendance (it should be noted that even the relatively generous study benefits offered in Sweden fall far short of making up for foregone earnings). The need to make up for these opportunity costs constitutes a risk in any institutional context. The two main determinants of opportunity costs are the time to degree completion and the income returns to a tertiary degree: The longer the time and the lower the payoff to a tertiary degree, the higher the opportunity costs incurred by students. How do these two factors differ across the three nations studied here? First, both the official and actual average time to a university degree were higher in Germany than in Sweden and the United States at the time our sample of students attended higher education, that is, before the Bologna reform (Smart 2005: p.266). Second, income returns to a tertiary degree were much lower in Germany and Sweden than in the United States in the time period considered here, partly thanks to relatively high wages of non-tertiary graduates. In the late 1990s, German and Swedish university graduates' income was about one-third higher than that of those who held only a higher secondary degree or non-university tertiary degree. In the United States, the ratio was twice as high with a 'college premium' of about two-thirds (OECD 2011: table A8.2a). As a result, the opportunity costs of attending higher education were thus much lower in the United States than in Germany or Sweden.

Taken together, these cross-national differences suggest that the universal insurance function of parental wealth may be amplified in Germany and Sweden when compared to the United States thanks to the higher opportunity costs of attending tertiary education in Europe and the added uncertainties brought about by the highly differentiated and static German education system.

Ultimately, it is difficult to compare the overall degree of risk that children and young adults face in their educational and occupational choices in these three systems once we acknowledge dimensions of risk beyond those already discussed, such as the psychological costs of failure. Nevertheless, the clear and for our purpose sufficient conclusion that can be drawn from the preceding discussion is that risk can be expected to be a pervasive and important feature in the status attainment process in all three contexts. Even countries with a large welfare state that may otherwise be described as "insurance-based mobility regimes" fail to provide insurance against the risks involved in intergenerational mobility. Hence, there is ample room for parental wealth to provide independent and substantial private insurance that positively impacts educational and occupational decision-making and attainment. Wealth may ultimately also affect occupational mobility by successfully shielding individuals from intergenerational downward mobility and through facilitating intergenerational upward mobility. We thus begin the empirical assessment of the role of wealth for the status attainment process with the hypothesis that wealth effects are present in all three contexts. While the hypothesized purchasing

function implies that parental wealth should play a pronounced role in only the United States, the insurance function suggests notable wealth effects in all three countries, and potentially even larger effects in the European context.

DATA AND MEASURES

The relationship between wealth and children's outcomes is understudied largely because of data limitations. So far, panel surveys in only two nations – the United States and Germany – have collected detailed measures of families' wealth and tracked their children long enough to observe their final educational and early occupational attainment. In addition to these survey data, however, Swedish register and census data offer the same kind of information. To our knowledge, these are the best data sources available to address our research questions. Below, we summarize the nature of both the survey and the register data used in this contribution.

The Panel Study of Income Dynamics (PSID) is the world's longest running, nationally representative panel study. It began in 1968 with approximately 4,800 households and continues to survey both original sample members and split-off households, such as those of their children. The analytic sample for this study consists of children of households that participated in the 1989 wave of the PSID, which included a full-fledged module to measure household wealth. Being of school age in 1989, these children have reached ages 26 through 38 in the latest available survey wave from 2009 (N=1,901).

The German Socioeconomic Panel (SOEP) is Germany's largest panel study, partly modeled after the PSID. It began in 1984 with about 6,000 households living in the Federal Republic of Germany and was expanded to the former German Democratic Republic after the fall of the Berlin Wall (Wagner et al. 2007). The 1988 survey wave included an extensive asset questionnaire and therefore builds the basis for the assessment of family characteristics. The children who were of school age in that year have also reached ages between 26 and 38 in 2008 (N=745).

The data for Sweden come from population-level registers and censuses between 1960 and 1990. The analytic sample is based on the 1985 census for the parents and a variety of administrative registers from 2007 for child outcomes (ages 28 to 40), linked through birth records in the multigenerational register and a shared census "apartment identification code" in 1985, which amounts to a sample definition that closely resembles that used for the household surveys in the United States and Germany. Naturally, the register data yield a much larger number of observations, namely the full universe of the analytic population (N=1,079,634). The socioeconomic information used here stems from different

⁸Another U.S. survey, the National Longitudinal Study of Youth 1979 and its Child and Young Adult Supplement, meets the data requirements for this study. Earlier research has demonstrated that the PSID and NLSY data yield substantively similar results for the questions addressed here (Pfeffer 2011). We choose the PSID as the data source for the cross-national comparison because it is much closer in design and sampling strategy to the German survey used here.

registers and censuses: Educational information for both generations is contained in censuses as well as registers from all public providers of schooling since the 1970s. Occupational information comes from censuses for the parent generation and employer-reported records for children.

The survey measures of wealth are fairly comprehensive and provide information separately for each asset type, namely, savings accounts, stocks, business holdings, real estate, home equity, and debts. These can be aggregated to a measure of net worth (real assets plus financial assets minus debts). In the register data, wealth is collected from tax reports and available only as a net worth value⁹. Taxable wealth is assessed at the family level for married couples and at the individual level for cohabiting couples. To increase the comparability of Sweden's register-based wealth measures to the survey-based wealth measures for the United States and Germany, the net worth values for Swedish families are computed by summing positive wealth for all adult individuals living within the same census apartment. In the period for which we assess wealth holdings (1980s), wealth was taxable only if it exceeded a certain threshold corresponding to about 300,000-400,000 SEK (roughly \$80,000-\$100,000 in today's values). Swedish residents were nevertheless required to report all of their substantive wealth to the tax authorities irrespective of whether it fell above or below the taxable threshold. We suspect that individuals with net worth far below the taxable threshold might have reported their total net worth less diligently, and if they did so, with higher measurement error. Therefore, we are more likely to miss smaller wealth holdings and fail to capture wealth effects at the lower end of the distribution. We have scrutinized this measurement error by conducting sensitivity analyses in which we have truncated the wealth distribution and imputed a floor value. The results reported here were robust to these sensitivity checks (available from the authors).

In our empirical models, net worth measures are assigned a ceiling value of two million dollars (2011-\$, purchasing power parity) and log-transformed to reduce skew. Cases of zero and negative wealth are assigned a floor value. The results presented here are based on a floor value of \$1,000 (2011-\$, purchasing power parity), which may more adequately reflect a baseline stock of material wealth needed for survival than a floor value of \$1, but our findings are stable to other arbitrary floor values.¹⁰

Remaining indicators of a family's socioeconomic standing are the highest number of years of

⁹While the register-based wealth measure is of generally high validity, it has some shortcomings. Most importantly, it does not include the full market value of apartments. The reason for this is that private ownership of apartments does not exist in Sweden. Instead, Swedes own apartments through membership in housing cooperatives and only the personal share in the cooperative's assets is taxable. However, these taxes do not reflect the full market value of the property. A more comprehensive description of this system is available from the second author.

¹⁰Unlike other indicators of socioeconomic standing, net worth may also take on negative values (net debt). The intergenerational implications of indebtedness certainly merit separate empirical attention (e.g. Houle 2012). For the purpose of this contribution, however, our conceptual focus on positive net worth coincides with the empirical restriction of the Swedish data, which do not allow distinguishing between zero net worth and net debt. We can, however, state that the inclusion of indicators of net debt for the United States and Germany leaves the reported net worth coefficients either substantively unaltered or serves to strengthen rather than diminish them (results available from the authors).

education and the highest educational degree completed by either parent, the highest international socioeconomic index score (ISEI; Ganzeboom et al. 1992; Ganzeboom and Treiman 1996)¹¹ – of either parent's occupation, the highest labor income of either parent, and the (natural logarithm of) family income averaged across several income years ("permanent income"). Offsprings' educational attainment is measured as the total number of years of education and degrees attained, occupational attainment is measured as the international socioeconomic index score of the current main occupation as well as current labor income. The choice of these measures is driven by an effort to replicate the variables most frequently used in existing comparative stratification research. For Germany and the United States, missing values on all variables are multiply imputed using the Stata mi module and estimation results are averaged across five completed datasets (Rubin 1987). For Sweden, the use of register data greatly minimizes non-response and attrition bias. Moreover, for our key wealth measure, which is provided through tax register information without any missing information, imputation is unnecessary.

To reduce measurement error in reports of socioeconomic standing, we draw on measures from at least two points in time: For most social background variables these are the years 1984 and 1989 for the PSID, 1987 and 1988 for the SOEP, and 1985 and 1990 for the Swedish census and register data. Permanent income measures are derived from five and ten year averages of family income (Solon 1992). For children's outcomes, we use information from the years 2007 and 2009 for the PSID, 2006 and 2008 for the SOEP, and 2004 and 2007 for the Swedish register data. In general, the measurement quality of register data is considered higher than that of surveys. In fact, register data are often used as a benchmark to assess the quality of survey measures. For the measurement of wealth we can, however, note that such comparison has yielded relatively favorable judgments about the quality of survey measures of wealth: Johansson and Klevmarken (2007) have found that wealthy households tend to underreport and asset-poor households tend to overreport the value of their assets, which would lead us to expect a downward bias in the size of wealth effects estimated based on survey data. Johansson and Klevmarken, however, also provide evidence that these differences in measurement error produce very little bias in the coefficient estimates for wealth when it serves as an independent variable, which instills some confidence in the comparability of wealth effects across the two different types of data sources used here. In addition, sensitivity analyses provided in prior work (Pfeffer 2011) also suggest that differential levels of error in the survey measures of wealth for the United States and Germany are unlikely to bias the results of that cross-national comparison.

¹¹For sharing cross-walks between occupation codes and socioeconomic index scores for the Swedish data we thank Erik Bihagen (see Bihagen 2007).

Methods

STATUS ATTAINMENT MODELS

The empirical assessment of inequalities in opportunity has a long history. For several decades, sociologists have studied this topic under a common framework, namely status attainment research. Status attainment models were developed in Blau and Duncan's seminal work *The American Occupational Structure* (1967) to estimate the relative effects of different background characteristics on individuals' educational and occupational success. Blau and Duncan's approach to the study of the reproduction of social inequalities might be the single most replicated model that sociology has seen. Over several decades it has been extended, modified, confirmed, and criticized (Campbell 1983; Ganzeboom et al. 1991). One especially persistent critique of these models comes from Bowles and collaborators (1972; 2002), who have repeatedly suggested that standard status attainment models yield a biased picture of the determinants of attainment because they fail to include important socioeconomic background characteristics. Bowles et al. assert that a key excluded characteristic is parental wealth – a factor whose independent role in in the intergenerational transmission of advantage we analyze here. Despite various methodological limitations of status attainment models, most centrally the reliance on continuous measures of educational attainment, they can be used to provide an informative and parsimonious first look at the independent role of parental wealth across the full attainment process.

Status attainment models are structural equation models that estimate the direct and indirect effects of an individuals' social background on their educational and occupational attainment. The graphic display of the estimation results takes the form of path diagrams with path coefficients that can be interpreted as standardized linear regression coefficients (directed arrows) and simple correlation coefficients (curved arrows). The inclusion and exclusion of any specific effect is based on considerations of model fit. Although these considerations are not discussed in detail here, we do note that all of the presented models based on survey data fulfill standard statistical criteria for satisfactory model fit (see Appendix; most standard measures of model fit are not informative for the Swedish case due to the large number of observations). The models estimated here also include a measurement model, which not only specifies that each (latent) variable is measured by indicators from at least two different points in time but also allows for measurement error in each variable and some selected correlations among these measurement errors. To further facilitate the focus on the substantive (structural) part of the models, the measurement part of these models is not further discussed here and not included in the path diagrams (but see Appendix).

We follow the common practice of labeling the estimated coefficients "effects" while stressing that they are estimated under specific assumptions about potential causality and, for the reasons mentioned above, are not meant to yield direct causal evidence – a point that has been emphasized from the outset

by the creators of path analysis (Wright 1934; Duncan 1966). Similarly, the empirical analyses do not attempt to directly identify which of the hypothesized mechanisms drive the observed associations. But, as suggested above, the outcomes of the comparison might allow us to infer the likely existence of some causal pathways.

EDUCATIONAL TRANSITIONS MODELS

The status attainment models provide a convenient first overview but come at the cost of viewing the analyzed outcomes, particularly educational attainment, as continuous and homogeneous. We therefore provide a more detailed look at the relationship between parental wealth and educational outcomes to assess whether these associations are uniform across the educational distribution or specific to some educational transitions. Educational transition models are a standard sociological tool for the study of socioeconomic differences in educational attainment. They take the discontinuous and discrete nature of educational attainment as the point of departure and allow estimating the educational choices the way students face them - as a series of transitions (Mare 1981). While this approach increases the realism of the model it has also been criticized on methodological grounds: In principle, every transition is estimated based on an independent sample and for each transition this sample becomes more selected on ability. A standard result in the educational transition literature is that social background effects tend to wane across transitions, with the accompanying sociological interpretation that this reflects increasing social distance between children and their parents. This result, however, can be entirely driven by the process of sample selection described above, which tends to mute social background differences by comparing a relatively more selective group of individuals from disadvantaged backgrounds to a relatively less selective group of individuals of advantaged backgrounds. Mare pointed to this problem in 1993, but it did not receive widespread acknowledgment until 1998 when Cameron and Heckman published a thorough critique of this literature (see also Buis 2011). Cameron and Heckman also criticized the underlying behavioral model according to which each transition is independent, implying myopia on behalf of the agents. Instead, they argue that children form expectations about their *final* level of attainment early on rather than just the most proximate outcome at each single transition step.

Thus the question of whether socioeconomic background effects – and in our case, the effects of parental wealth – vary across levels of educational attainment, while of high theoretical interest, is empirically difficult to assess. Lucas (2001) argues that the estimation problem can be solved through time-varying or transition-varying controls, such as grade point averages from the most recent level of education. Other recent suggestions include the use of assumption-rich methods, such as instrumental variable models or latent class estimation of the unobserved component (Lucas 2010). Since we do not

have access to transition-specific controls, we approach non-linearities in educational attainment from a more agnostic perspective. Angrist and Pischke (2008), who express general skepticism towards non-linear models that condition on previous events, suggest that the function $P(Y \ge C)$ with varying thresholds C can be used as an outcome to assess non-linearities. The function produces binary outcomes with C as cut-off values that can then by analyzed through logit models or linear probability models (LPM). As opposed to the transitions approach, the estimation sample is kept intact across transitions. The cost is that our focus shifts to variations in the final distribution of education (in line with Cameron and Heckman 1998), rather than transition-specific differences. For the United States, we distinguish high school graduation, college attendance without graduation (but including attainment of associate's degrees; "some college"), and bachelor's degree attainment (BA). For Germany, we analyze completion of the highest secondary track (Gymnasium) and graduation from university. ¹² For Sweden, we look at the completion of the academic upper-secondary track, which prepares for university studies, a tertiary degree, and – thanks to the large number of observations – we can also investigate the attainment of post-graduate degrees ("long tertiary").

We estimate binary logit models of the $P(Y \ge C)$ form. Since logit models are identified by assuming a specific error variance, the coefficients they produce are difficult to compare across models and samples (Mood 2010). In addition to odds ratios (OR), we therefore also report average marginal effects (the average of individual-specific marginal effects, which are identical to LPM coefficients), which we denote $\partial y/\partial x$, and a proportional version that shows the relative change in $P(Y \ge C)$ for a unit change of an independent variable, which we denote $E(y)/\partial x$. The last coefficient is similar to a probability ratio but evaluated separately for each individual and then averaged rather than computed directly from some point in the outcome distribution. It not only allows the direct comparison of coefficient sizes across transitions within each nation but – in combination with the cross-nationally comparative measurement of variables – the comparison of coefficient sizes across countries.

OCCUPATIONAL MOBILITY MODELS

Finally, given our theoretical focus on wealth's insurance function, we are interested in its overall role in avoiding downward occupational mobility and facilitating upward occupational mobility. We analyze upward and downward intergenerational mobility based on differences in parents' and children's occupational status (ISEI). We define cases of mobility as those in which parental and child ISEI scores diverge by five or more units.¹³ Logistic regression models predicting either upward or

¹²The restricted statistical power of the analyses of the German sample does not allow more disaggregate analyses. Separate analyses of a different and larger analytic sample for Germany, which is based on a younger cohort and thus less fitting for the cross-national comparison, provide additional empirical evidence of wealth effects on educational attainment in that country (Pfeffer 2012).

¹³A difference of five ISEI points is equivalent to about a third of a standard deviation in the offspring ISEI distribution in all three countries. To further illustrate, an example for a case of downward mobility of five ISEI points would be

downward mobility allow us to investigate the role of wealth for the risk of intergenerational status change. Mobility analyses based on parents' and children's labor income percentiles instead of ISEI units produce the substantively same conclusions and are available upon request.

RESULTS

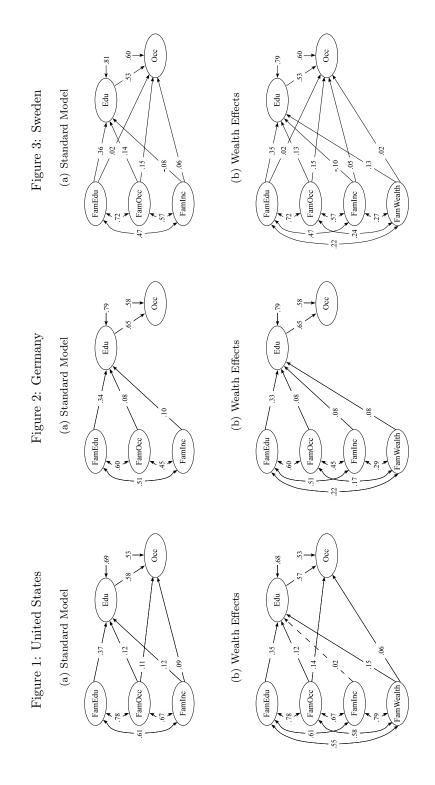
STATUS ATTAINMENT

To assess how the inclusion of wealth alters conclusions drawn from status attainment models, we begin by replicating the standard model of status attainment, which includes only parental education, parental occupation, and family income as background characteristics. In a second step, we add the net worth measure and observe its effects on educational and occupational attainment as well as the resulting changes in the general structure of the intergenerational transmission of advantage. The resulting path diagrams are displayed in Figure 1 for the United States, in Figure 2 for Germany, and in Figure 3 for Sweden. All displayed coefficients are statistically significant (p<.05), with the exception of one coefficient indicated by a dashed line and retained for illustrative purposes.

United States In the standard model of status attainment for the United States (Figure 1a), parental education (FamEdu) exerts the strongest effects on children's attainment compared to other indicators of social background. This finding corresponds well to the common result of most analyses of intergenerational mobility processes. Under control of parental education, parents' occupational status (FamOcc) as indicated by the socioeconomic index also exerts significant effects on educational attainment and, beyond those, direct effects on occupational attainment. The same holds true for household income (FamInc), which exerts stable direct effects on educational and occupational outcomes. Overall, this base model yields rather comparable conclusions about the relative force of different social background components and matches up well with the classical results of status attainment research (Blau and Duncan 1967; Sewell and Hauser 1975).

Many other aspects of these models are of potential interest as well, but our analytic focus is on how the overall structure of these models changes once wealth enters the picture. Figure 1b depicts these changes. First, the intergenerational effects of parental wealth are significant and strong. The size of the coefficients is in the broad range of that of other background effects with the exception of the effects of parental education. Second, the direct effect of parental wealth on occupational attainment under control of its association with educational attainment is also significant and about half the size of its direct effect on education. The only other direct background effect on occupational attainment is that

that from a middle school teacher to a librarian. The wealth effects reported here can also be detected for other ISEI distances and the role of wealth can also be shown to be even more pronounced for larger ISEI changes across generations in Sweden and Germany (results available upon request).



of parental occupation. Third, by adding parental wealth to the classical status attainment model, the effects of family income are reduced to statistical and substantive non-significance. This suggests that in prior research family income measures have at least partly functioned as proxy measures for intergenerational wealth effects.¹⁴ Overall, the suspected strong role of wealth in the process of intergenerational status transmission is confirmed for the United States. Both educational and occupational outcomes are clearly associated with the value of parents' net worth, with all other classical indicators of social background held constant.

Germany In the base model of status attainment for Germany (Figure 2a), we again observe strong effects of parental education on their children's educational attainment, which surpass the otherwise significant effects of parental occupation and family income. In contrast to the U.S. case, however, none of these background factors exerts direct effects beyond educational attainment on occupational destinations. In other words, the transmission of labor market advantage seems to be entirely mediated by educational attainment. This does not necessarily imply that the structure of intergenerational mobility would be in any way more "meritocratic" than in the United States. Instead, it means that higher status parents succeed in passing along advantage to their children through higher levels of educational attainment. Beyond this, parents' socioeconomic resources do not – perhaps do not need to – contribute to status maintenance.

Now, what changes when we add parental wealth to the picture? In Figure 2b we observe a significant effect of parental wealth on educational attainment, incidentally of the very same size as the effects of parental occupational and family income. Parental education remains the most crucial component of social background, and status reproduction still fully works through the transmission of educational advantage. But based on these results, the role of parental wealth in intergenerational mobility merits at least as much attention as that of income and occupational background. Another reason that wealth inequality should be included in analyses of intergenerational mobility in Germany is that, to an even greater extent than in the United States, wealth forms an independent dimension of social inequality that partly runs across existing lines of socioeconomic stratification, as indicated by the weaker correlation of wealth with other social background characteristics.

Sweden In Sweden, the base model of status attainment (Figure 3a) also reveals the familiar dominant role of parental education in impacting the educational attainment of the next generation, but no substantive direct effects on occupational attainment (we remind the reader that thanks to the large sample size any coefficient will be statistically significant). No surprises either for the smaller

¹⁴The hesitation to make the broader claim that all of what we believed to be income effects are in reality wealth effects is based on results from the NLSY data, where the reduction of income effects is less pronounced but still notable (see Pfeffer 2011)

but substantial effects of parental occupation on both educational attainment and occupational attainment. The intergenerational influence of parental income is much smaller. Surprisingly, however, the association between income and educational attainment appears to be negative, under control of parental education and occupation. A feasible explanation of this counterintuitive result is that in the context of a generous welfare state, higher income based on the same educational and occupational status likely derives from social transfers. In that case, the negative income effects reflect the underrepresentation of students at higher levels of education who have experienced economic hardship during childhood. This explanation is supported by results from models in which we replace total income with market earnings, which do exert the expected positive effects.

These standard background effects remain basically unchanged when we add parental wealth to the model (Figure 3b). As in the German case, the relatively low correlation between wealth and the other background characteristics could account for this stability. The independent effects of parental wealth on educational attainment are again notable and of the same size as the effects of parental occupation. Substantial wealth effects beyond educational attainment cannot be detected.

Crossnational Comparison Finally, what have we learned about the relative centrality of parental wealth for the intergenerational transmission of status in these three countries? Comparing the sizes of the presented standardized regression coefficient within each dataset, the most sensible conclusion is that of cross-national similarity in the relative importance of parental wealth as one ingredient of intergenerational advantage. The effects of parental wealth on educational attainment are notable in all three countries. While wealth effects are significantly smaller than the effects of parental education – about two-fifths of the parental education effect in the United States and Sweden and one quarter in Germany – they are basically the same size as the effects of parental occupation in all three nations.

The influence of wealth in the status transmission process extends beyond educational attainment in the United States, but not in Germany or Sweden. For Germany, a lack of direct effect on occupational attainment is not particular to parental wealth; in fact, none of the included background characteristics shows a direct effect on occupational destination once educational attainment has been taken into account. With the exception of intergenerational income effects, the overall structure of the intergenerational transmission of advantage appears very similar across these three nations, most notably regarding the intergenerational effects of wealth.

¹⁵While the cross-national harmonization of measures described above facilitates the comparison of wealth effects across nations, a direct evaluation of differences in coefficient sizes across countries shall be reserved for the discussion of results yielded by the statistical models presented below, which we consider a more valid foundation for this type of comparison. It can, however, already be noted that based on the results presented so far it would be difficult to conclude that these three countries differed radically in the importance of wealth for educational attainment.

EDUCATIONAL ATTAINMENT

Next, we analyze non-linearities in educational attainment to investigate whether the estimated wealth effects are general or specific to some transition – a result that will yield further evidence relevant to the discussion of the purchasing and insurance role of wealth. We also expand the models to include further controls for children's and parents' age, gender, race, family structure, and household size (estimates not shown here; see online Appendix).

United States Table 1 reports the results for degree attainment in the United States. All of our measures of social background show positive effects across all cut-offs. Not all coefficients are significant, however, as the statistical power is limited by the small sample size. The wealth effects are borderline significant for high school attainment and BA attainment, but play a smaller role for the attainment of "some college". One log unit of wealth increases the probability of attainment at these levels by approximately one percentage point. Since the base is smaller at higher educational levels, this means a stronger relative effect (around one percent for high school and seven percent for BA) and an increasing effect of wealth (as well as other socioeconomic characteristics) at higher levels of educational attainment. This indicates that wealth is important to all levels of degree attainment in the United States rather than solely to a specific transition.

Germany For Germany, the sample size is even smaller and the statistical power accordingly low. Although statistically non-significant, the wealth effects reported in Table 2 are positive and very similar across educational transitions. This suggests that the significant wealth effect we detected earlier in the status attainment models is important across all levels of attainment rather than specific to only secondary or tertiary attainment. Although statistical power is a concern, our interpretation is that wealth effects are similar across levels.

Sweden Because the results presented for Sweden are based on such a large number of observations, inference is much more certain (or, to the extent that the full population is included, dispensable). As shown in Table 3, the wealth effects show great uniformity across all levels of education. While the absolute effect, indicated by the average marginal effect $(\partial y/\partial x)$ varies somewhat across levels, the proportional effect is very stable. As shown in the $E(y)/\partial x$ column, one log unit of parental wealth increases the probability of attainment by ten percent at each level of education. If we examine t-values as an indication of the proportional contribution to R-square as if the variable was added last to the model (Bring 1994), we find that parental wealth and occupation are of roughly equal importance (and, as usual, parents' education remains the most important background factor). One should also note that the conditionally negative effect of income observed in the attainment models

Table 1: Degree Attainment: United States

	High sch	iool	Some Co	llege	BA		
	OR	dydx	OR	dydx	OR	dydx	
	(t) I	E(y)dx	(t)	E(y)dx	(t)	E(y)dx	
FamEdu	1.416***	0.022	1.363***	0.052	1.472***	0.054	
	(5.288)	0.028	(7.964)	0.103	(9.421)	0.280	
FamInc	1.206	0.012	1.299+	0.044	1.378 +	0.045	
	(0.900)	0.015	(1.879)	0.087	(1.856)	0.232	
FamOcc	1.291***	0.016	1.130**	0.021	1.137**	0.018	
	(3.533)	0.020	(3.283)	0.041	(3.187)	0.093	
Wealth	1.150 +	0.009	1.038	0.006	1.098 +	0.013	
	(1.830)	0.011	(0.834)	0.012	(1.830)	0.067	
Controls	incl.		incl.		incl.		
N	1,836		1,836		1,836		

 $+~p{<}.10,~*~p{<}.05,~**~p{<}.01,~***~p{<}.001$

Table 2: Degree Attainment: Germany

	Gymnas	ium	University				
	OR	dydx	OR	dydx			
	(t)	E(y)dx	(t)	E(y)dx			
FamEdu	1.369***	0.060	1.174+	0.022			
	(4.149)	0.188	(1.916)	0.128			
FamInc	1.151	0.027	1.995 +	0.094			
	(0.436)	0.084	(1.915)	0.550			
FamOcc	1.194*	0.034	1.078	0.010			
	(2.141)	0.106	(0.768)	0.060			
Wealth	1.044	0.008	1.022	0.003			
	(1.245)	0.026	(0.538)	0.018			
Controls	incl.		incl.				
N	703		703				

 $+\ p{<}.10,\ ^*\ p{<}.05,\ ^{**}\ p{<}.01,\ ^{***}\ p{<}.001$

Table 3: Degree Attainment: Sweden

	A 1 . C	-			T		
	Academic Se	econdary	Tertia	ary	Long Tertiary		
	OR	dydx	OR	dydx	OR	dydx	
	(t)	E(y)dx	(t)	E(y)dx	(t)	E(y)dx	
FamEdu	1.214***	0.026	1.212***	× 0.032	1.254***	0.023	
	(99.558)	0.144	(106.738)	0.144	(96.435)	0.197	
FamInc	1.095***	0.012	0.852***	-0.026	1.005	0.001	
	(6.185)	0.068	(-12.347)	-0.120	(0.323)	0.005	
FamOcc	1.027***	0.004	1.016***	× 0.003	1.019***	0.002	
	(85.740)	0.020	(57.928)	0.012	(53.041)	0.016	
Wealth	1.150***	0.019	1.147***	k 0.023	1.139***	0.013	
	(69.934)	0.104	(74.850)	0.102	(55.727)	0.114	
Controls	incl.		incl.		incl.		
N	682,656		682,660		682,656		

+ p<.10, * p<.05, ** p<.01, *** p<.001

can be entirely attributed to the tertiary level. The explanation offered earlier, namely, that this negative effect is driven by transfer income, would thus imply that the educational disadvantages of children from families with welfare income are particularly pronounced at the post-secondary level.

Crossnational comparison Although the limited statistical power in the analyses of the survey data complicates the comparison of coefficient sizes across countries, the results suggest that the estimated wealth effects are *most* pronounced in Sweden across all educational transitions. The effect sizes in the United States and Germany are similar to each other with the exception of a larger effect for the post-secondary attainment in the United States, but this comparison is again limited by low statistical power. The key conclusion to be taken away from these results, however, is that the education effects observed in the status attainment models are not restricted to single educational levels but in fact extend across educational transitions in all countries.

SOCIAL MOBILITY

Finally, we analyze the role of parental wealth for downward and upward occupational mobility. We report models that include all controls used above for children's and parents' age, gender, race, family structure, and household size, but do not condition on children's own educational attainment. In the status attainment models, we have seen that a large share of wealth's influence on occupational attainment is transmitted through educational attainment. The primary question addressed here is whether parental wealth successfully shields against intergenerational downward mobility or even facilitates upward mobility, irrespective of whether its influence on occupational attainment is direct or mediated by education (and a large part of it is, as suggested by significantly reduced wealth coefficients in models that include controls for education; not shown). While we report results based on a comparison of ISEI scores between generations, the results for intergenerational labor income (earnings) mobility are similar and lead to the same substantive conclusions (available from the authors).

United States The first column of Table 4 reports the comparison between downward occupational mobility and immobility and the second column the comparison between upward mobility and immobility for the United States. We find that parental wealth protects against downward mobility and promotes upward mobility although these effects are right at the margin of statistical significance (p<.05). As indicated by the average proportional effect $(E(y)/\partial x)$, one log unit change in parental wealth reduces the risk of intergenerational social demotion by five percent and increases the relative probability of social ascent by six percent. The other measures of socioeconomic background are associated with the likelihood for demotion and ascent in the same direction: Parental education is associated with substantially lower risks for demotion and a higher likelihood of ascent. Family income

Table 4: Social Mobility: United States

	Downward	Upward
	OR dydx	OR dydx
	(p) $E(y)dx$	(p) $E(y)dx$
Parental Education: HS	0.626+ -0.087	1.773* 0.089
	(0.084) -0.249	(0.045) 0.386
Parental Education: Some College	0.445** -0.150	2.411** 0.137
	(0.006) -0.429	(0.004) 0.593
Parental Education: BA or more	0.275***-0.240	3.844*** 0.210
	(0.000) -0.686	(0.000) 0.908
Family ISEI	1.097**** 0.017	0.898***-0.017
	(0.000) 0.049	(0.000) -0.073
Family Income (10yr average)	1.041 0.007	$1.134 \qquad 0.020$
	(0.815) 0.021	(0.497) 0.084
Family Wealth	0.911+ -0.017	1.092+ 0.014
	(0.053) -0.049	(0.077) 0.060
Controls	incl.	incl.
N	1,566	1,566
N Families	1,071	1,071
Log Likelihood	-863	-744
Quasi-R2	0.204	0.247
Mean of Dep.Var.	0.469	0.326

+ p<.10, * p<.05, ** p<.01, *** p<.001

shows insignificant and comparatively weak associations with intergenerational mobility. Controls for parental ISEI, in these models, account for floor and ceiling effects, that is, the fact that a higher origin status is associated with a higher risk of social demotion and a lower origin status with a lower risk for demotion.

Germany Despite the small sample size, the association between wealth and occupational mobility in Germany (Table 5) is statistically significant and strong. The protection against intergenerational downward mobility is especially strong: One log unit of wealth is associated on average with a 15 percent lower risk of social demotion. The association with upward mobility is half of that size. Again, parental education shows very substantial effects in the same direction while family income has insignificant and weak effects. We also observe the same floor and ceiling effects based on the controls for parental ISEI as we did in the United States.

Sweden Table 6 reveals that parental wealth also protects against social demotion in Sweden. We find that one log unit of wealth reduces the relative probability of demotion by five percent. Wealth's association with social promotion is again the mirror image: One log unit of parental wealth is associated with a six percent higher chance of higher occupational status among offspring compared to their parents. Family income is associated with a strong reduction in the risk of demotion, close to ten percent per log income, while its association with upward mobility is weak. Controls for parental

Table 5: Social Mobility: Germany

	Downward	Upward
	OR dydx	OR dydx
	(p) $E(y)dx$	(p) $E(y)dx$
Parental Education: Years	0.792***-0.035	1.176* 0.030
	(0.001) -0.170	(0.012) 0.079
Family ISEI	1.113*** 0.016	0.903***-0.019
	(0.000) 0.079	(0.000) -0.050
Family Income	0.959 -0.006	0.898 -0.020
	(0.930) -0.030	(0.808) -0.053
Family Wealth	0.810** -0.031	1.194** 0.033
	(0.004) -0.154	(0.006) 0.087
Controls	incl.	incl.
N	445	445
Log Likelihood	-204	-243
Quasi-R2	0.212	0.211
Mean of Dep.Var.	0.267	0.510

 $^{+\} p{<}.10,\ ^*\ p{<}.05,\ ^{**}\ p{<}.01,\ ^{***}\ p{<}.001$

Table 6: Social Mobility: Sweden

	Downward	Upward
	OR dydx	OR dydx
	(p) $E(y)dx$	(p) $E(y)dx$
Parental Education: Vocational US	0.934***-0.013	1.168*** 0.029
	(0.000) -0.039	(0.000) 0.106
Parental Education: Academic US	0.697***-0.071	1.851**** 0.113
	(0.000) -0.210	(0.000) 0.420
Parental Education:Post-secondary	0.593***-0.102	2.195*** 0.144
	(0.000) -0.303	(0.000) 0.537
Parental Education:Short Tertiary	0.372***-0.194	2.341*** 0.156
	(0.000) -0.574	(0.000) 0.581
Parental Education:Long Tertiary	0.273***-0.255	2.709*** 0.183
	(0.000) -0.753	(0.000) 0.680
Family ISEI	1.088*** 0.017	0.927***-0.014
	(0.000) 0.049	(0.000) -0.052
Family Income	0.845***-0.033	$1.019 \qquad 0.003$
	(0.000) -0.098	(0.159) 0.013
Family Wealth	0.910***-0.019	1.101*** 0.018
	(0.000) -0.055	(0.000) 0.065
Controls	incl.	incl.
N	643,590	643,590
N Families	481,307	481,307
Log likelihood	-3.71e + 05	-3.50e + 05
Quasi R-squared	0.153	0.130

⁺ p<.10, * p<.05, ** p<.01, *** p<.001

ISEI again capture floor and ceiling effects in intergenerational mobility.

Crossnational comparison For all three countries, we show that parental wealth is associated with a reduction in the risk of social demotion and an increase in the likelihood of social ascent. We

find the strongest effects in Germany – however, given the small size of the German sample we refrain from giving the difference in effect magnitude much weight – and we find effect sizes that are still substantial and similar to each other in the United States and Sweden. Overall, our results suggest that parental wealth has an important role in shielding offspring from intergenerational downward mobility and sustaining their upward mobility in the United States, Germany, and Sweden.

SUMMARY

The analyses presented above reveal that parental wealth is associated with children's life chances in all three countries studied. Independent from more standard indicators of socioeconomic background – namely, parental education, occupation, and income – parental wealth emerges as an important factor in the intergenerational transmission of advantage. The status attainment models provide the first evidence for wealth's central role in the transmission of advantage across generations. Our models of educational attainment further indicate that parental wealth is important for educational outcomes at all levels of education in all three countries. Finally, and largely as a result of its strong effects on educational attainment, parental wealth is also associated with both a reduced risk of intergenerational downward mobility and increased chances for upward mobility.

In sum, the independent associations found between parental wealth and different attainment outcomes – educational success and social mobility – demonstrate the importance of wealth in the intergenerational transmission of status, on par with the more frequently studied indicators of parental occupational status and family income, but of less importance than parental education. Parental wealth qualifies as a particularly relevant socioeconomic background characteristic in not only the United States, but also in Germany and perhaps even more so in Sweden.

We have also argued that the crossnational comparison may lend credence to some of the hypothesized mechanisms underlying intergenerational wealth effects. The purchasing function of wealth has been hypothesized to be especially pronounced in the United States given the profound geographic inequalities in that nation's distribution of educational resources and its high tuition costs. On the other hand, we expected the insurance function of wealth to be relevant in all three nations given the universal risks inherent in educational decision-making and even presented arguments why wealth's insurance function may be even more important in Sweden and Germany compared to the United States. We detected a fairly similar role of parental wealth for educational attainment and intergenerational mobility in all three countries. This finding is in line with the view that parental wealth may indeed serve as an important safety net for educational investments, a role that goes beyond the more frequently assessed purchasing function that we believe may only account for part of wealth's intergenerational effects in the United States. In addition, we consider the wealth effects that we

detected for lower levels of the educational ladder in all countries as additional evidence in favor of parental wealth's early and lasting influence on educational decision-making.

Conclusion

A broad contribution of this work consists in the proposal of a new conceptual framework for the comparative study of intergenerational mobility that considers risk as a universal feature of educational careers and intergenerational mobility processes. We noted that the three countries studied in this contribution are all marked by a lack of public insurance mechanisms that could isolate families and children from these risks. Following existing theoretical perspectives on the social functions of economic assets, we proposed that – in place of public insurance schemes – parental wealth may provide effective safety nets for educational decision-making and attainment trajectories marked by risk. While the empirical finding of consistent wealth effects in all three nations strengthens the credibility of this explanation and thereby further contributes to the emerging field of wealth studies, we believe that the offered conceptual framework may also help orient future comparative work on intergenerational mobility, much like existing mobility typologies will serve to inspire further comparative work on intragenerational mobility. The need for a coherent theoretical framework for the analysis of intergenerational mobility is indeed great. Arguably the last monolithic attempt in this regard was industrialization theory (Kerr et al. 1960; Treiman 1970). It proposed that the rise of technologically advanced manufacturing and bureaucratically organized industries produced – following a functional imperative - a "new mobility regime" that is characterized by high intergenerational mobility rates and the increasingly meritocratic (that is, achievement-based rather than ascription-based) allocation of individuals to education and occupational positions. As a theoretical reference point for the empirical analysis of intergenerational mobility, industrialization theory has been utterly successful (see Erikson and Goldthorpe 1992; Ganzeboom et al. 1991). This empirical work, however, has repeatedly refuted the theory's predictions. Far from claiming to have provided a similarly ambitious theoretical framework, we nevertheless hope to contribute to the further theoretical development of comparative research on intergenerational mobility by directing its attention to the identification of risks involved in intergenerational mobility processes and the forms of insurance available to counter those risks. This conceptual focus unifies important existing strands of theoretical work in sociological stratification research, namely those on the role of risk in educational decision-making in the sociology of education (Breen and Goldthorpe 1997), the role of insurance in the literature on welfare state and intragenerational mobility regimes (Esping-Andersen 1990; DiPrete 2002), and – for our application to the assessment of parental wealth – the role of economic assets as safety nets in the literature on wealth (Spilerman 2000; Shapiro 2004).

Turning back to a strand of research that has served as a conceptual departure point, the comparative study of intragenerational mobility (DiPrete 2002), we expect that future work will also be able to empirically identify the relevance of private insurance schemes for labor market mobility (e.g., Ehlert 2012) more directly by explicitly taking into account wealth. Given the youthful status of wealth research, the empirical questions to be tackled are indeed manifold, particularly once we go beyond socioeconomic attainment to consider other measures of economic well-being such as off-spring's own wealth position (see Charles and Hurst 2003), and demographic events such as fertility or migration (see Schneider 2011 for an investigation of wealth's interaction with marriage patterns). Finally, a pressing descriptive task to be tackled is whether wealth has grown to be more important for these outcomes over time, which may be expected based on the coinciding trends of increasing wealth inequality (Wolff 1995; 2006), increasing levels of uncertainty faced by children and young adults (Blossfeld et al. 2005; 2008), and an alleged large-scale shift of risks from the state to the individual (Hacker 2007).

Another important and challenging task for future research remains the direct empirical identification of the mechanisms we have hypothesized to underlie intergenerational wealth effects. Although we have put much conceptual weight on the distinction between wealth's purchasing function and its insurance function, the way in which our analyses address these hypotheses empirically is rather indirect - as, we would claim, inferences on micro-mechanisms drawn from comparative research necessarily are. However, we expect that research on wealth will increasingly turn toward empirical analyses that approximate the social mechanism behind the revealed intergenerational wealth effects. Notable recent contributions along those lines include Lovenheim's (2011) identification of credit constraints to college entry as they related to home values in the United States, which we consider a convincing proof of the importance of the purchasing function of housing wealth in many American families' asset portfolios. In addition, the insurance function of wealth may be empirically approximated through the consideration of educational aspirations as the most immediate outcome of the educational decision-making process (see Destin and Oyserman 2009; Pfeffer 2010). Of course, the mediating role of educational aspirations in intergenerational mobility processes is hardly a new line of investigation (see Sewell et al. 1969; Morgan 2005), but we believe it may play a particularly prominent role in accounting for the insurance effects of parental wealth. All of these empirical projects, however, will face similar pressures to rule out the claim that intergenerational wealth effects are subject to unobserved bias.

Given the empirical questions that remain to be answered, it would be premature to formulate specific policy recommendations for the reduction of wealth inequalities in children's life chances. Instead, we end by pointing out the general requirements and limitations of policy approaches that follow from our main proposal that parental wealth fulfills an insurance function against the risks inherent in

educational decision-making. The reduction of wealth inequalities in opportunities could in principle be accomplished by altering (a) the risks that educational investments entail, (b) the relationship between these risks and educational decision-making, or (c) the wealth distribution itself. The first policy approach that seeks to reduce the risk involved in educational careers could do so through a reduction of the risk of failure. Some education systems, such as that of Germany, leave ample room for improvements in the availability and fluidity of transitions and 'second-chance' pathways within the secondary sector; and in many nations educational policy is just beginning to attend to the need of smoothing the transition patterns between different types of tertiary education (Arum et al. 2007; Goldrick-Rab and Pfeffer 2009; Milesi 2010). Of course, even in systems optimized in this respect, educational failure and the risks associated with it will not entirely cease to exist. A second approach, one seeking to break the link between risks and educational decision-making, could curtail parents' influence on children's promotion from one educational level to the next. Certainly, there are many normatively permissible restrictions on families' freedom of educational decision-making (Swift and Brighouse 2009), the introduction of compulsory schooling being just one example. Given the promise of policies geared at improving early childhood education (Cunha and Heckman 2007; Heckman and Masterov 2007), another example that may be worthy of discussion is the expansion of compulsory schooling to earlier ages. But even short of a dystopian world in which families are dispossessed of all educational decision-making powers (Young 1958), the extent to which education systems may restrict families' power to decide on different educational pathways is clearly limited by the degree to which they encroach on basic values of the family, such as its responsibility for the selection of educational goals (Blau and Duncan 1967; Coleman 1974; Swift and Brighouse 2009). Finally, wealth inequalities in opportunities can be limited by reducing the extent of inequality in the distribution of wealth. We would therefore argue that it is a most urgent task for social-scientific research to further delineate the promises and limits of decreasing the concentration of wealth at the top of the distribution, for instance, through wealth and inheritance taxation (Wolff 2002; Beckert 2008), and spreading asset ownership at the bottom of the distribution (Schreiner and Sherraden 2007).

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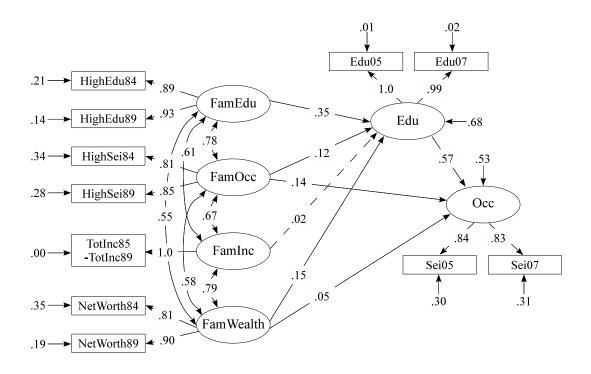
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Appendix

Figure 4: Full Status Attainment Model: United States



Fit statistics (N=1,665): Chi^2 =50.64, df=28, p=.00584, RMSEA=.022, BIC=-157.1 Correlations in measurement errors: HighEdu84-HighSei84, HighEdu84-Wealth84, Wealth84-HighSei84, Edu07-Occ07

Correlation table

	edu05	edu07	sei05	sei07	edu84	edu89	sei84	sei89	ltincadjln	wealth84	wealth89
edu05	1.000										
edu07	0.988	1.000									
sei05	0.550	0.546	1.000								
sei07	0.562	0.568	0.696	1.000							
edu84	0.483	0.481	0.373	0.339	1.000						
edu89	0.494	0.490	0.359	0.342	0.826	1.000					
sei84	0.410	0.409	0.328	0.319	0.629	0.597	1.000				
sei89	0.399	0.403	0.312	0.302	0.579	0.604	0.690	1.000			
ltincadjln	0.423	0.421	0.343	0.333	0.538	0.564	0.551	0.569	1.000		
wealth84	0.360	0.361	0.284	0.245	0.446	0.416	0.445	0.418	0.632	1.000	
wealth89	0.372	0.376	0.311	0.270	0.451	0.453	0.426	0.442	0.708	0.726	1.000

.05 Edu06 Edu07 HighEdu87 .98 1.01 FamEdu .33 HighEdu88 Edu .60 .08 HighSei87 .65 .58 1.10 FamOcc .78 HighSei88 Occ .45 .22 .08 .89 TotInc84 FamInc .00 1.0 -TotInc88 Sei06 Sei07 .08 .21 .29 .13 ¥ FamWealth NetWorth88

Figure 5: Full Status Attainment Model: Germany

Fit statistics (N=745): $\mathrm{Chi}^2=33.36,\,\mathrm{df}=24,\,\mathrm{p}=.09679,\,\mathrm{RMSEA}=.023,\,\mathrm{BIC}=-125.4$ Correlations in measurement errors: HighEdu88-HighSei88, HighSei88-TotInc, Edu06-Occ06

Correlation table

	edu06	edu07	sei06	sei07	edu87	edu88	sei87	sei88	ltinc	wealth88
edu06	1.000									
edu07	0.984	1.000								
sei06	0.605	0.613	1.000							
sei07	0.560	0.582	0.830	1.000						
edu87	0.426	0.441	0.292	0.284	1.000					
edu88	0.425	0.441	0.289	0.280	0.994	1.000				
sei87	0.376	0.376	0.219	0.231	0.664	0.660	1.000			
sei88	0.268	0.268	0.159	0.158	0.468	0.472	0.857	1.000		
ltinc	0.309	0.315	0.193	0.181	0.505	0.506	0.493	0.308	1.000	
wealth88	0.209	0.202	0.165	0.159	0.221	0.215	0.188	0.134	0.288	1.000

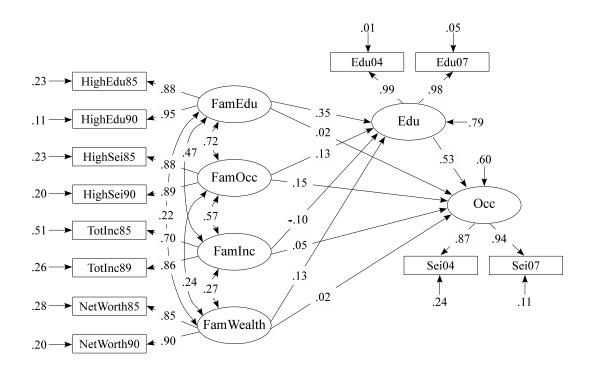


Figure 6: Full Status Attainment Model: Sweden

Fit statistics (N=1,079,634): Chi^2 =18999.13, df=33, p=.000, RMSEA=.023, BIC=18,540.7 Correlations in measurement errors: HighEdu85-HighSei85, HighSei85-TotInc85, TotInc85-NetWorth85, TotInc89-HighSei90, TotInc89-Edu90, Edu04-Occ04

Correlation table

	edu04	edu07	occ04	occ07	edu85	edu90	occ85	occ90	inc85	inc89	wlth85	wlth89
edu04	1.000											
edu07	0.970	1.000										
occ04	0.536	0.507	1.000									
occ07	0.567	0.557	0.821	1.000								
edu85	0.365	0.365	0.295	0.311	1.000							
edu90	0.409	0.407	0.330	0.343	0.830	1.000						
occ85	0.323	0.321	0.304	0.316	0.606	0.599	1.000					
occ90	0.320	0.317	0.322	0.332	0.573	0.612	0.789	1.000				
inc85	0.166	0.162	0.155	0.159	0.295	0.294	0.378	0.340	1.000			
inc89	0.151	0.142	0.190	0.186	0.359	0.365	0.433	0.425	0.573	1.000		
wlth85	0.208	0.196	0.165	0.160	0.189	0.219	0.207	0.213	0.255	0.246	1.000	
wlth89	0.217	0.205	0.171	0.167	0.198	0.223	0.211	0.215	0.230	0.261	0.771	1.000