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**Sonderforschungsbereich 186
der Universität Bremen**

**Statuspassagen und Risikolagen
im Lebensverlauf**

The Educational System as a Marriage Market

A Longitudinal Analysis of Marriage in the Life Course

by

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and
Faith Dasko**

Working Paper No. 46



Preface

In our collaborative multidisciplinary research program “status passages and risks in the life course” the project B6 (Household Dynamics and Social Inequality - An International Comparison) analyses the relationship between household dynamics and status passages in the life course of household members. The focus is on changes in the individual members’ life courses as conditions and consequences of household transitions. The transition of interest in this study is marriage.

In this paper, spouse selection in the life course of single German men and women is reconstructed step by step and marriage behavior of a series of birth cohorts in the last 50 years is compared. The study primarily concerns the way in which young men and women pool their educational resources at their first marriage. It becomes apparent that in the course of educational expansion in West Germany the educational system constitutes an increasingly important marriage market. From birth cohort to birth cohort intragenerational educational assortative mating has considerably increased, strongly indicating that social structure and social circles have become more exclusive rather than inclusive in the process of modernization.

Prof. Dr. Walter R. Heinz

Chair, Special Collaborative Programme No. 186

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1. Introduction

The answer to the question "Who marries whom?" is central to understanding the reproduction of social inequality in society (Mare 1991). Homogamy and heterogamy rates reflect the degree to which individuals of different social origin and with various characteristics, such as education, religion or occupation, marry each other. Moreover, they indicate the degree of social closure of social structures and social circles (Simmel 1970; von Wiese 1967).

Unfortunately most of the available studies have been based on *ex post facto* analysis of already married couples¹ (Jürgens 1973; Mayer 1977; Tegtmeier 1979; Galler 1979; Haller 1983; Ziegler 1985; Handl 1988; Teckenberg 1991; Ultee/Luijkx 1990; Jones 1991; Mare 1991; Kalmijn 1991; Erikson/Goldthorpe 1992; Uunk/Ganze-boom/Robert 1992; Uunk 1996; Wirth 1996). This means that such studies start from existing marriages and attempt to retrospectively reconstruct and thereby explain patterns of marriage behavior on the basis of the individual social characteristics of both spouses (such as their social origin, education or occupation). The problems of such a methodological approach are obvious. It not only starts from the outcome (the later matches of partners) and analyzes the (earlier) social conditions for these matches, but also excludes systematically *those who are still single* at the time of the interview.² A more logical procedure would begin with the social conditions preceding partner selection and then continuing through the life course to reconstruct the resulting patterns of marriage (Blossfeld 1996; Blossfeld/Müller 1997).

The aim of this study is therefore to reconstruct step by step the process of spouse selection in the life course of single men and women and to compare the marriage patterns of successive birth cohorts in the last 50 years. Of central interest is the more specific question *on ways that young men and women pool their educational resources at their first marriage*. The spouse's level of education is thereby considered a main characteristic of social inequality: it not only determines each of the individual's labor market, income and career chances within marriage but also the cultural resources of the family. Educational homogamy thus implies that the *existence of social inequality in an individual's life course can be further increased*, since the good or bad sociocultural and economic resources corresponding to higher and lower levels of education of men and women are cumulated at marriage (Mayer 1977). Should educational homogamy increase in the course of history, this not only leads to reinforcement of *social inequality between married*

¹ This is also true for consensual unions, see Frenzel 1995, for example.

² See Ziegler (1985).

couples from one cohort to the next, but also to a growing differentiation of social chances of each following generation of children.

The most important result of completed studies on assortative mating thus far is the strong correlation between characteristics of both spouses, like social origin and level of education. This suggests that there are mechanisms in modern society which determine *intergenerational* reproduction of social inequality and influence *intragenerational* spouse selection. The decisive question is *how social inequality is reproduced by the manifold individual choices regarding spouse selection in the life course*. Since today men and women are not forced to marry a particular person, a more plausible explanation of spouse selection has to rely, on the one hand, on the dynamic interplay of *opportunity structures and marriage markets* and, on the other, on *individual preferences, inclinations and strategies* (Blossfeld 1996; Blossfeld/Müller 1997). In particular, one should investigate how the mechanisms responsible for influencing *isolated individual marriage decisions at the microlevel* lead to a far-reaching *reproduction of social inequality at the macrolevel* and, conversely, why a not insignificant number of men and women still succeed in *escaping the forces of social reproduction* and marry a person who does not have the same social origin or educational background.

In this study *processes in educational achievement and marriage behavior of single men and women - from the family of origin through the diverse hierarchical stages of their educational tracks up to the point of first marriage - are reconstructed from a longitudinal perspective on the basis of retrospectively gathered biographies of the German socio-economic panel data (SOEP: "Sozio-ökonomisches Panel")*. To our knowledge, this is the *first study of educational assortative mating* in which the analysis is *not done ex post facto*, starting with *existing marriages*; but proceeds step by step *ex ante* and examines the process of spouse selection in the life course (see also Blossfeld/Müller 1997).³

³ This is of methodological importance since the age-specific rate to marry and the respective highest level of education accomplished in the life course are interdependent (see also Galler 1979; Ziegler 1985).

2. Changes in educational homogamy from generation to generation

In recent public and sociological discussion it is claimed much too quickly that structures of social inequality are losing importance and that social positions have rapidly become individualized. The theoretical foundation of such an assessment are generally based on *pure macro-analyses*, such as those represented by modernization (cf. Treiman 1970; Blau/Duncan 1967; Bell 1975; Parsons 1971), industrialization (Kerr 1983) or individualization (Beck 1986; Hradil 1987) theories, all of which are thoroughly teleological and historically descriptive in character (cf. Goldthorpe 1996). From a presumed *inherent developmental logic* in processes of industrialization and social modernization, which normally largely remains obscure (cf. Mayer/Blossfeld 1990), a trend towards openness, meritocratization or individualization in society is inferred. As a consequence, of course, *rates of educational homogamy should have clearly decreased in the course of history.*

Let us therefore first turn to describing the social phenomenon "educational homogamy" and how educational assortative mating has changed through history before we approach the reconstruction of processes of spouse selection in the life course. This is also necessary in view of the *current empirical findings* which are considerably *contradictory*. Ziegler's (1985), and Ultee and Luijkx's (1990) findings, for instance, indicate a *decreasing tendency* of educational homogamy in modern societies. Teckenberg (1991) and Wirth (1996) have in contrast found a *largely constant* structure of patterns of marriage based on educational attainment. And finally, Mare's (1991) and Kalmijn's (1991) study show evidence of a slight increase in educational homogamy. How can these empirical findings be explained? And which tendencies capture West Germany's developments in the last 50 years?

Besides the differences in the historical periods of observation and further national peculiarities one of the decisive reasons for the contradictory diagnosis is the use of varying educational classification schemes. In most studies of homogamy usually the available educational classification schemes are used - in most cases without a sound theoretical basis - to analyse the process of change in marriage behavior. Often the maxim in those studies is the following: the more differentiated the educational classification included in the calculations is, the better one can analyze processes of homogamy. Lacking in this argumentation is that the social consequences of different educational certificates are not sufficiently taken into account. This way, multiple differences in marriage patterns are made evident which are of less social consequence. It seems to be reasonable to ask whether the marriage of a woman with intermediate schooling without

vocational training and a man with lower secondary schooling without vocational training should be classified as sociologically heterogamous due to the differences in educational attainment. Or is it sensible to maintain that this marriage is homogamous because the educational certificates of both spouses provide very similar individual consequences for life chances in terms of social inequality and social opportunities (see Blossfeld 1985, 1989).

In this paper we follow a new strategy in sharp contrast to conventional studies of educational homogamy. The emphasis here is not so much on the various titles of educational qualifications but rather on the differences in individual opportunities connected with various levels of qualification. Therefore, a homogamous marriage is defined as a union between spouses who have attained through completion of vocational educational certificates similar social opportunities. Such marriages can in this way represent a cumulation of individual advantages or disadvantages that individuals have accumulated over their life course. Characteristic for a heterogamous marriage is that the advantages and disadvantages accumulated over the individual life courses are to some extent offset. Our hypothesis is that the institutions of the educational system structure the social networks of individuals over time. Individuals are not conscious of the fact that these institutions determine the probabilities to meet potential spouses with similar social characteristics. Therefore, the system has a direct and an indirect impact on the marriage market of individuals.

In this analysis we chose a classification scheme of educational attainment which adequately represents educational attainment levels which have real implications for social opportunities. Based on several earlier empirical studies on occupational mobility (see e.g. Blossfeld 1985), income (see e.g. Hannan, Schömann and Blossfeld 1990, 1995) and career opportunities (see e.g. Blossfeld and Mayer 1988; Blossfeld 1989) we decided to use an educational scheme with four hierarchical levels: (1) lower secondary (*Hauptschule*) and intermediate schooling *without* vocational training (*Mittlere Reife*), (2) lower secondary (*Hauptschule*) and intermediate schooling (*Mittlere Reife*) *with* vocational training or higher secondary schooling (*Abitur*) *without* and *with* vocational training, (3) specialized technical college degree (*Fachhochschulabschluß*), and (4) university degree. This classification of educational levels does not only correspond to a large extent to the four career segments in the public service sector in West Germany (ordinary, intermediate, higher intermediate and higher service positions) (Blossfeld 1985; Becker 1993); it also reflects global entry, career and income opportunities of employees in the private sector (Blossfeld 1985, 1989; Becker 1993; Hannan, Schömann, Blossfeld 1990). The designations "higher",

”lower” and ”equal” thus have a clear social meaning in our study of assortative mating (see also Blossfeld 1985, 1989; Becker 1993).

Some consequences of variations in this educational classification scheme on the observed trends of homogamy are shown in the appendix. Column 1 of this table reflects the classification used in this paper and is equivalent to the figures in Table 1. In Column 2 we differentiate in addition between *lower secondary schooling (Hauptschule) without vocational training* and *intermediate schooling (Mittlere Reife) without vocational training*. The results are almost identical to Column 1. In Column 3 we differentiate furthermore the graduates of *higher secondary schooling (Abitur) without and with vocational training* from those who completed *lower secondary schooling with vocational training or intermediate schooling with vocational training*. The basic trend towards more homogamy across cohorts that is shown in Columns 1 and 2 is found again in Column 3. The rates of homogamy in Column 3 differ to Columns 1 and 2 by about 5 to 10 percent. Finally, we differentiate between *lower secondary schooling with vocational training*, on the one hand, and *intermediate school qualifications (Mittlere Reife) with vocational training and higher secondary school qualification (Abitur) with and without vocational training*, on the other. In Column 4 you can see the danger of relying too much on educational titles per se in an analysis of educational homogamy. In this column the trend towards rising homogamy (as observed in Columns 1, 2 and 3) is superimposed and concealed. In Column 4 the homogamy trend seems to be non-monotonic. At first educational homogamy rises and after cohort 1944-48 falls again. How can we explain this non-monotonic trend? There is a simple explanation. Using this educational classification the typical marriage of a woman with *intermediate schooling and commercial vocational training* to a man with *lower secondary schooling) and industrial vocational training* (which make up about 35 percent of marriages for women with intermediate schooling⁴) is treated as heterogamous. Moreover, in this case the wife (due to her completion of intermediate schooling) would be regarded as having married downwards and the husband (due to his lower secondary school certificate) would be classified as having married upwards. However, this does not reflect their labour market, income and career opportunities (see Blossfeld 1985, 1989). Much rather, these two individuals have very similar gender-specific and socio-economic resources connected with their educational attainment (see Blossfeld 1985, 1989). In the course of the democratization of education, women have for many years been more able to attain intermediate school qualifications with vocational training; men at the same time have more often completed

⁴ Only 26 percent of women with intermediate schooling with vocational training marry a man with intermediate schooling with vocational training. This means that the majority of women with intermediate schooling and vocational training marry men with lower secondary schooling with vocational training.

lower secondary school qualifications with vocational training. Consequently, an increase and then a decrease in homogamous marriages can be observed (see Blossfeld/Timm 1997). Based on these observations, we decided to use the classification with only four hierarchically ranked levels of educational attainment.

Table 1 shows the trends in marrying upwards, marrying downwards and homogamous marriages of wives and husbands, each according to birth cohort. This table also contains estimations of the predicted development of patterns of marriage under conditions of statistical independence. This means that the predicted values reflect the tendency to marry assortatively, given a random selection of spouses and the distribution of educational attainment level of women and men, respectively, in each birth cohort.

Four results of the empirical developments in Table 1 are especially notable. At first, if we exclude the cohorts at the opposite ends born between 1900-1918 and 1964-1978 (as each of them suffers from specific selectivities which are difficult to interpret) going from the older to the younger cohorts, one can observe a strong and almost continuous rise from approximately 44% to over 70% in the proportion of homogamous marriages. The differences in the percentages for husbands and wives in the different cohorts can be attributed to age differences between spouses, meaning that men and women partially belonged to different birth cohorts (see also Klein 1996).

Secondly, in Table 1 it is also evident that the proportion of *upward marrying women* - and the mirroring trend of *downward marrying men* - is surprisingly high. This indicates that in West Germany, as in most industrialized countries (McRae 1986), there were *social norms* at work orienting women (especially among the older cohorts) less towards acquiring their own education and instead towards placing more value in marrying men who have higher qualifications or at least similar levels of education. These norms are part of a traditional notion that husbands and not wives are responsible for lifelong gainful employment. We will discuss this point in greater detail below.

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Table 1: Distribution of Upward, Downward and Homogamous Marriages With Regard to Educational Attainment Level for Birth Cohorts (partner's highest educational attainment level at time of marriage)

Cohorts	Upward Marriage		Homogamous Marriage		Downward Marriage		
	Observed	Estimated Based on the Independence Model	Observed	Estimated Based on the Independence Model	Observed	Estimated Based on the Independence Model	
	%	%	%	%	%	%	%
<u>Wives</u>							
(1900- 1918)	48.4	50.6	50.3	40.2	1.3	9.1	100
1919 - 1923	52.1	53.9	43.9	38.7	4.0	7.4	100
1924 - 1928	46.7	50.0	49.3	41.6	4.0	8.8	100
1929 - 1933	54.4	51.3	40.8	37.8	4.8	11.0	100
1934 - 1938	37.8	42.1	56.0	47.1	6.2	10.8	100
1939 - 1943	36.9	39.5	58.1	50.6	5.0	9.9	100
1944 - 1948	26.7	33.4	65.5	52.6	7.8	13.9	100
1949 - 1953	27.0	33.4	68.8	52.5	4.2	14.1	100
1954 - 1958	23.9	27.1	70.6	55.0	5.5	17.7	100
1959 - 1963	21.6	24.5	70.0	58.4	8.4	16.7	100
(1964-1978)	22.3	28.3	69.9	49.2	7.8	22.7	100
Total							100
<u>Husbands</u>							
(1900--1918)	1.9	9.1	51.7	40.2	46.5	50.6	100
1919 - 1923	5.8	7.4	44.8	38.7	49.4	53.9	100
1924 - 1928	4.6	8.8	42.5	41.6	52.9	50.0	100
1929 - 1933	5.9	11.0	45.6	37.8	48.5	51.3	100
1934 - 1938	5.8	10.8	57.5	47.1	36.7	42.1	100
1939 - 1943	5.1	9.9	61.6	50.6	33.3	39.5	100
1944 - 1948	5.4	13.9	66.8	52.6	27.8	33.4	100
1949 - 1953	6.3	14.1	70.7	52.5	23.0	33.4	100
1954 - 1958	3.8	17.7	73.7	55.0	22.5	27.1	100
1959 - 1963	7.7	16.7	71.5	58.4	20.8	24.5	100
(1964- 1978)	13.4	22.7	65.2	49.2	21.3	28.3	100
Total							100

Source: Socio-Economic Panel, Waves 1984-94

Thirdly, from cohort to cohort there is evidence that *traditional marriages are becoming less important*: whereas it was quite normal that women born before 1933 were in traditional marriages (approximately 54%), the percentage of women in traditional marriages in the cohort born between 1959 -1963 fell to approximately 21%. The traditional pattern of marriage is nonetheless *still relatively widespread with one-fifth of the married couples among the younger cohorts*.

Finally and fourthly, there has always been a *small percentile of women and men who have deviated from traditional norms pertaining to marriage*. These women have married less qualified men; or conversely, the men have married more highly qualified women. Interestingly this proportion has remained relatively stable across cohorts, fluctuating at levels between 4% and 8%; *none of the cohorts show a specific trend*. This is particularly astonishing if we take into account that women have in comparison to men profited much more from the expansion of educational opportunities (Shavit and Blossfeld, 1993). From a purely statistical view, the probability of marrying a higher qualified women should have continuously increased for each younger cohort of men.

This is clear when comparing the observed distribution with the predicted "random" distribution of spouse selection (according to educational attainment) for men and for women of a respective cohort and given distribution of educational attainment. The expected values for example of the female cohort born between 1954-1958 who should have married downwards is 17.7%; the observed value was however in fact only 5.5%. For those born between 1924-1928 the difference between the observed and predicted values were in contrast only 4.8 percentage points (8.8% and 4.0% respectively).

Across cohorts the comparison of the observed with the predicted values shows two additionally interesting findings (see Table 1). For one, empirical evidence shows that educational homogamy has always been *"above chance"* and this tendency has been further reinforced by the expansion of education across cohorts. Secondly, the observed tendency for women to marry upward has always been close to the predicted values of the "random" model. In other words, this means that, given the gender-specific distribution of educational attainments, there has been a "structural need" for women to marry higher educated men.

The theoretical and empirical challenges are now to reconstruct how the pattern of educational homogamy as an aggregate of many individual decisions in the life course has developed and to explain why this has moreover been reinforced across generations.

3. Theories and hypotheses

This study is based on the theoretical position that every sociological analysis requires a *dynamic integration of a macro- and microperspectives* (cf. Blossfeld 1996; Blossfeld/Müller 1997). In particular, it builds on the following five main premises.

Five general explanatory premises or why "non-rational" factors on marriage decisions are of secondary importance from a sociological view:

First, it is assumed that patterns of social regularities, such as in "educational homogamy", must be theoretically explained at the level of the individual actors ("principle of methodological individualism"; see, e.g., Lindenberg 1996). But individuals should not be considered statically: i.e. not only at the point in time of marriage or the interview (Blossfeld 1996). Rather, it is important to *reconstruct step by step in the life course the series of actions* which are relevant for the marriage event (cf., e.g., Mayer/Tuma 1985; Mayer 1990). It is important here to reconstruct the *time-related* structural action contexts of marriage decisions (Blau 1994) that reduce the infinite possibilities to act to a concrete number of action alternatives (vgl. Elster 1979).

Secondly, it is necessary to specify a mechanism that singles out an action from among the available structurally determined alternatives. Since individuals choose marriage partners, this mechanism must be based on *orientations, expectations and convictions of individuals*.⁵

Thirdly, the *"free will"* of individuals has to be taken into account.⁶ *This introduces an essential element of indeterminacy into causal inferences in theoretical explanations and predictions. This means that the generality but not the determinacy of marriage decisions can only be*

⁵ Even in the case of traditional and habitual behavior, the actors can at all times be conscious about the subjective meaning of their actions.

⁶ "Free will" is just as difficult to define as the term "chance". What is meant with these two terms is that it is either impossible or at least senseless to trace all possible determining factors. Modern-day atom physics generally accepts today that certain processes must be considered indeterminable. In quantum physics, as opposed to classical macro-physics, a state is not described by its observed values but by the probability of possible values (Scheid 1996). Blossfeld and Rohwer (1995) have argued strongly that sociologists should take the "free will" of actors more seriously into account and should strictly avoid using deterministic in favor of probabilistic explanations of human action: i.e. in theoretical and empirical work not to use models with the characteristics (values) of actions, but rather the probability of the change in actions.

plausibly accounted for and modelled. A sociologist should therefore only refer to the *common motivations of many actors* and not the idiosyncratic motivations of individuals. In this sense, Max Weber referred to the *average or near (i.e. "idealtypical") reconstruction of the context of meaning and motives* of actors.

If spouse selection of a larger number of actors is explained, *the "weak" model of rational choice has a privileged role.* This is not only because the average woman and man try to act reasonably but because the predictability of the behavior of aggregates can be done most successfully if we assume that individual actors act more or less rationally (Elster 1989a; Stinchcombe 1968). This "weak" model assumes that human action is goal-oriented, that there are different means available to the actors to achieve these ends, and that they tend to base their decisions on selecting the best alternative after weighing and comparing the probable costs and benefits of each combination of means and ends (Weber 1972).

However, it is most often not possible to make "rational" choices with respect to a future spouse. Individuals are often faced by at least the following three concrete decision problems: (1) *possible* future marriage partners are still *unknown*; (2) it is *impossible to evaluate* long-term *costs and benefits* of known alternatives; and (3) the marginal advantages and/or disadvantages resulting from collecting further information about the possible partner search are unclear. In short, the decision situation is more or less indeterminate, making it close to impossible to make a rational (or calculated) decision. Individuals therefore normally need another mechanism to be able to make marriage decisions. These consist, according to Heiner (1983), in the orientation towards social norms which assist individuals in undefined, current decision situations. The orientation towards social norms allows individuals not only to act in a manner understandable to others but to understand others' actions and predict how others will most probably behave. According to Heiner (1983) it is for this reason that, paradoxically, individual actions are ever more understandable and predictable the more undefined and the more impossible it is to evaluate the decision-making situation, since social rules of behavior will be even more restrictive. *Social norms* have thus an important function in the explanation of marital *decisions*. Of theoretical importance here is the presupposition of a reflected or, in principle, potentially reflective use of social rules. The main function that norms take on in the decision-making process has been elaborated by Elster (1989b): it is in the coordination of expectations of the involved actors. Norms have a coordinating function in that they appeal strongly to the emotions (to such feelings as shame, embarrassment, fear, guilt or awkwardness) of the actors and the other involved persons.

Critics of this type of rational choice model argue that there are several "non-rational" factors influencing the choice of a spouse which are necessarily neglected with such a "narrow" perspective. This is correct. Such models abstract from the *individual case* which might be very important for an explanation of why a *particular individual* chooses a certain spouse. These factors are however usually of little value in explaining *social differences* in the process of educational homogamy or *changes* in this process, since these differences normally do not vary systematically across groups with different levels of educational attainment or over time. For example, "beauty" and "sexuality" are important factors in spouse selection. As long as one cannot however claim that this is true for one group more than for another or as long as these factors do not increase or decrease in importance in regard to educational homogamy, this sort of additional information is not particularly useful for predicting spouse selection of groups, even if such characteristics could be measured properly (cf. Oppenheimer 1988). Moreover, the fact that individuals tend to have strong affection for potential partners does not change the point that individual decision-making is not responsive to *objective structural conditions*. *Realities* are very often *expressed* through emotions and do not seldom affect individuals in considering a certain person as a potential partner (Oppenheimer 1988).

Educational system and educational homogamy

The model of spouse selection developed above depicts marriage decisions as the result of a *long-term, cumulative and continuously changing life course process* (Haller 1982). From a social structural point of view, this process begins with socialization in childhood and youth in the family of origin, which can be specified above all through different economic and cultural contexts, and branches off in the educational system and into different occupational careers. This process is connected with a *continuous restructuring of social networks and interaction relationships in the occupational and private spheres* (Laumann 1973) which makes for a constant change in the chances of meeting certain potential spouses in everyday activities.

Decisions about partners and spouse selection are most often made in the phase of *transition from youth to adulthood*. The process of transition can not be described by rigid age categories but much rather through the gradual adoption of specific social roles and differential participation in certain activities (Hogan 1978; Marini 1984; Blossfeld/Nuthmann 1989). The decision to marry is itself a defining characteristic of the normative conception of the transition into adulthood

(Featherman/Hogan/Sorensen 1984). The other significant transitions (e.g. completion of education, entry into occupational life and a career) are determined by the educational system and the employment system. In the following the focus is on the role of the educational system with respect to spouse selection in the life course.

The *hierarchical organization of the educational system* above all promotes among youth and young adults a *relatively rigid life course logic*: the educational process is organized by a step by step sequence of hurdles that have to be mastered by each generation. Points of transition in educational biographies can *not be arbitrarily chosen, revised or postponed and if so only with difficulty* (cf. Blossfeld 1989, 1990). Every educational hurdle is faced by a percentage of young adults that masters each hurdle while another percentage fails to succeed in the process of acquiring higher qualifications. The probability of successfully completing a particular educational attainment level depends, on the one hand, on *places available* in different forms of schooling for each generation and, on the other, on the *social mechanisms of allocation*, such as discrimination according to gender or social origin (cf. Mare 1981; Shavit/Blossfeld 1993).

From a *life course perspective* the gradual process of selection in the educational system has chiefly three important consequences for educational homogamy. First of all, the selectivity in the educational system has created *increasingly homogeneous groups*, since in each generation the less qualified are leaving the educational system. From one step in the selection process to the next, only those youth or young adults remain together longer who attain either the same or a higher educational level. If one accepts Blau's (1994) assumption that the probability of developing friendships is dependent on contact opportunities, then there is a *structurally determined increased likelihood of establishing a social relationship with a similarly qualified partner - and then perhaps of later marrying him/her* - due to the mere fact that one has continued in the educational system. *It is important to note that we mean not only the contacts that one makes directly within educational institutions but those within a broader circle of contacts: friends and friends of friends, opportunities for contact in free-time activities and the like which are structured directly or indirectly by the educational system.* Conversely, the structural chance of meeting a partner with a different level of educational attainment decreases significantly with time in school because (1) those in the respective age group with lower qualifications have left the educational system in the life course and have thereby taken "other trajectories" (with different social networks); (2) the "ceiling effects" or chances of meeting a partner with higher qualifications clearly decreases as the level of educational attainment advances. Thus, the growing possibility of meeting people with the same level of qualification is more frequently a by-product of the

selection process in the educational system which in turn indirectly increases the likelihood of educational homogamy.

Secondly, the process of selection in education means that *the more highly qualified will leave the educational system at a later age*. Since attaining an education makes it difficult to participate in activities pertaining to family roles (Marini 1985) and attending school, the university⁷ or vocational training programs involves a high degree of financial dependency on parents or the state (Blossfeld/Nuthmann 1989), many men and women who are still completing their education are *"not prepared"* to start a family. *Completion of education* is thus also an important step in the normative conception of the transition to adulthood and in this way it becomes a significant *prerequisite for entering marriage* (Blossfeld/Huinink 1989; Blossfeld/Jaenichen 1990). Since the more highly qualified will postpone *starting a family*, the probability grows that they will then *quickly "catch up"* with their age cohort and marry the partner who *became a friend during the period of education*. The consequence will therefore be that there is a rising strong tendency to marry persons of the same educational attainment level not only directly after leaving the educational system, but also because of the aforementioned processes of selection involving education-related contact chances which *should considerably rise as the level of education of the young men and women rises*.

Thirdly, in this educational selection process the less qualified *enter the labor market and employment at an earlier age*. This transition is often connected with a more heterogeneous social network, which implies an increase in the frequency of contacts to people with different social characteristics, such as age, occupation, educational attainment, etc. The chances of meeting a spouse with a different level of education is thus structurally increased. Many of these contacts will occur by chance and be unimportant. But without the chance to meet people no new social relationships can develop. Not seldom do life-long friendships and marriages begin with such "coincidental" encounters (Blau 1994). This group of less qualified people is not only *prepared to marry at an earlier age* but this (conscious or latent) state of "readiness" meets up with a *much more heterogeneous marriage market*. In this sense a lower level of educational attainment is related to an *earlier and higher likelihood of heterogamy* in the life course. On the other hand, lower skilled young adults who have left the educational system earlier in the life course will for a long time at the workplace tend to meet other people in their age group with similar educational attainment. Furthermore, if the assumption is true that individuals tend to prefer spouses of

⁷ The flexibility of time schedule at a university is perhaps an exception.

approximately the same age, this should reinforce the tendency of homogamous marriage among the less qualified. Having left the educational system earlier, however, the decision to marry may tend to be made at later points in the life course among lower qualified people. Homogamy among the lower qualified is therefore characterized less by age.

In summary, the respective opportunities to meet a potential spouse in the life course of men and women should be very different with regard to educational attainment and highly time-dependent because they are based on the logic of a hierarchically structured educational system. *The likelihood of educational homogamy should increase significantly with the level of educational attainment.* A logical implication of such a life course process is that through educational expansion (cf. Shavit/Blossfeld 1993; Müller/Karle 1993; Erikson/Jonsson 1996) the *tendency of educational homogamy should continue to increase across generations*, since the level of educational attainment and the duration of educational participation increases for a growing number of cohort members (cf. Blossfeld 1985, 1989).

Aspects of individual marital decisions

The continuously changing structural opportunities to meet people and find a marriage partner in the life course represent however only the *necessary conditions for assortative mating* (Blau 1994). The young men and women still have to choose the partner or spouse from within their social networks. The explanation of these processes requires an "average" or "idealtypical" model of decision making ("ideal types" as constructed by Max Weber, 1972) (cf. Blossfeld 1996; Blossfeld/Müller 1997).

From the view of the individual, the life course is connected with a *continuous change of identity*, values, preferences, and expectations (Haller 1982). As a consequence the inclination to choose a partner, and perhaps also to marry, according to certain characteristics will repeatedly change in the life course. Since one cannot assume that men and women are fully informed about all of the potential partners, our search model⁸ must be based on the premise that people develop a more

⁸ Choosing a partner does not have to be the result of an active search. One can definitely find a partner without searching.

or less vague and conscious idea of what they consider to be an acceptable marriage partner⁹ (Oppenheimer 1988). People who do not satisfy this *baseline definition of an acceptable spouse* are not seriously considered anymore, while those who do fulfill this minimal definition must not be "ideal partners". The search will therefore *not* be continued until a *perfect partner* has been found. The extent to which the real partner corresponds to the notion of an ideal partner as well as the duration of the search are thus dependent upon the baseline definition, which can of course also change in the life course. Moreover, marriage partner decisions, it is important to remember, are *consensual choices*. This means that if a person wants to let a first encounter or repeated rendez-vous develop into a long-term intimate relationship or marriage, then this goal can only be achieved, if both partners agree (Blau 1994). *Both* partners must therefore have an interest in the continuation and stability of the relationship and, if the case may be, of turning it into a marriage. Thus, the rationalities of both partners have to be taken into account.

Along with Blau (1994) it is also assumed here that two individuals begin and maintain a partnership, because both *expect* the relationship to be *worthwhile*. If the first step into a partnership is a successful experience, often a process of self-fulfilling prophecies develops. The exchange is of social not economic character (cf. also Blau 1964; Curtis 1986). That is, if a person can benefit from a social relationship, it is not implicitly or explicitly stipulated per contract that a benefit be rendered in return, though the situation engenders a *temporally unspecified, diffuse commitment to provide for some sort of benefit in return*. Such inclinations to give in return are thereby entirely upheld and reinforced by *self-interest* in the continuation of the social relationship and by social norms, such as "expectations of appreciation". The diffuseness and in principle poorly defined mutual commitments imply however that an intensive exchange between two persons can only ensue if more solid social bonds had previously existed which were based on *trust*. Every couple's main problem consists therefore in the *building and establishing of trust*. Thus becoming a couple involves *individual striving for reward*, but the *decisive benefit* is when the close friendship with mutual support and trust has been established - that which constitutes the worthwhile partnership experience per se (Blau 1994). Therefore a partnership can not last long if its basis of trust is violated anew. Whereby here social norms can also be effective: those which socially disapprove of such behavior and promote trust-building behavior.

⁹ The criteria do not have to be consciously formulated. It can also be a matter of relatively vague notions of what one is looking for in a partner.

Elster (1979) suggested that decisions to marry can therefore be interpreted as an important method to increase trust in the future of a partnership. By deciding to marry the *actors* commit *themselves* at present to act responsibly toward their partner in the *future*. This self-commitment points to a long-term goal in life which entails the desired future behavior towards one's partner which one will most probably follow. As Elster (1979) has remarked, the expected change in the probability of one's own future behavior is the real motive and not only an unintended consequence. Such long-term self-commitment creates a *greater basis of trust and gives future behavior greater credibility*, furthering *cooperation* in the partnership (at least at the beginning).

Gender-specific mechanisms

In the following we mainly concentrate on the influence of gender and social origin on the partner selection process. Provided that there are no differences in income distributions between men and women on the labor market, both men and women should, according to Becker (1981: 73) benefit mostly from a partnership in which each person resembled as much as possible his/her partner in terms of all social characteristics (intelligence, health, education, personality, religion, social origin, etc.). This implies that the preference and benefit structure of men and women tend to be inherently prone to (educational) homogamy, i.e., "the like likes the like"; and there is a series of empirical indicators that suggest that this is in fact true (Blau 1994: 4).

Modern societies are however characterized by a marked *gender-specific division of labor* and the ensuing *mutual dependency between the sexes*. According to Becker (1981) for this reason the benefit function of men and women differ considerably. Women and men do not only marry to fulfill the need for intimacy or because they want to have children together. They also marry because the roles set up by society are complimentary; thus both partners can each reap a greater benefit from living together than if they stayed single. In accordance with this traditional gender role model, men expect to benefit from their wives, since women have been socialized to be more oriented towards taking charge of the household and raising children; women, on the other hand, count on benefiting from men since men have specialized themselves in the goal of life-long gainful employment. A *good education* is therefore, *especially for men, of much importance* in the traditional family model since the man's income position and the concomitant *social status of the entire family* are thereby determined. Thus, *women will prefer men with a higher education* and better labor market chances and will *compete* for them. From a male perspective the impor-

tance of the educational level of women is *ambiguous* based on the traditional family model. For one, men have the greatest advantage if their partners are as *similar* as possible in characteristics, *including the educational level*. On the other side, traditional men are interested in women who have *not invested too much* in their *own career* and thus in their *market-related* education. In other words, they prefer women with *as similar as possible qualifications* but who are *less career oriented*. For men the level of education of a woman carries thus less weight in spouse selection. In the traditional gender-role model, men will nevertheless at least *try to find equally qualified partners*. Since women in a traditionally oriented society attach less value to the role of their formal educations, the *average* level of education among women remains far below that of the men. *Only some* of the men will therefore *succeed* in finding a woman with the *same respective qualifications* (see Table 1). Empirical evidence for older birth cohorts has shown that *wives often have a lower level of education* and are *often younger* than their husbands. Thus, and using this action model to explain these data, it is *less important for traditional women to have a formal higher education* than it is for traditional men. Furthermore, it is easier for women at a younger age to assess each *partner's future important role attributes* (housewife versus career or breadwinner roles) (Oppenheimer 1988). Certainly one can not deny that it is above all those among the older cohort in our analysis for whom this traditional action model played an important role (see Table 1). This model is capable of explaining *men's tendency towards educational hypogamy*, and *women's towards educational hypergamy*. But such action models are also subject to social change.

The probability that young men and women follow intentional traditional norms in a series of birth cohorts strongly depends on the *degree of conformity* in each of the preceding generations with these norms as well as the usefulness of these behavioral norms with regard to the changing social environment. The traditional gender-specific pattern of action in which men prefer women who have the same or lower level of qualifications and are younger, will definitely start to become weaker should the *life-long market-based employment* not only be reserved for men but also *increasingly become a central component of wives' conception of life* (cf. Blossfeld/Drobnic/Rohwer 1996; Blossfeld/Hakim 1997). This change not only causes *education* to be of growing importance in the life of each younger generation of women - with all of the aforementioned consequences for the structural chances to meet *equally qualified* partners. This change also shifts the *cost-benefit calculation* of each younger generation of men and women. Oppenheimer (1988) in particular brought attention to the fact that in a society in which the continuous gainful employment of wives has become normal, wives' incomes increasingly become a determinant in the living standard and "lifestyle" of the families (see also Egebeen/Hawkins 1990). Women have increasingly taken over a part of the "breadwinner role" in the family,

previously only reserved for the husbands in the traditional family model. Since the level of education is clearly an important factor determining the labor market, career and income chances of women, *men* in each successive younger generation will prefer *increasingly higher qualified women*. Men with the highest qualifications will attempt to choose women with the highest qualifications (Mare 1991). Men with lower qualifications will also prefer women with higher qualifications, but since their competitive chances are at a relative disadvantage they will only tend to be able to choose among women with worse labor market, career and income chances. The relative improvement in women's educational attainment compared to that of men (Blossfeld 1985, 1989; Shavit/Blossfeld 1993) leads from generation to generation to an increase in the competition for qualified women. This, together with women's *structurally increased chance of meeting people* of equal qualification in the educational system, *should raise the level of educational homogamy across cohorts and reduce the educational hypergamy of women*. This process of competition should also explain the interesting findings in Table 1, which shows that the proportion of women who marry less qualified men (educational hypogamy among women) has not particularly grown across cohorts, although the increase in the level of qualification among women was relatively stronger than among men (Blossfeld 1985, 1989; Shavit/Blossfeld 1993).

Mechanisms of social origin

Of importance for our understanding of educational homogamy as a step in the process of reproduction of social inequality is the role of direct and indirect effects of social origin.

From the theoretical position taken in this paper, it follows that one cannot understand partner and marriage decisions to be simply dictated by social class and the associated socio-cultural milieus (i.e. their subcultural norm and value systems) which are carried out unreflected by the actors. Rather, it is presupposed that norms specific to social origin are used in a conscious way or can at least in principle be reflected on, leaving open the possibility of social change in these norms (Elster 1989b).

With respect to *direct influences of social origin* one can first of all expect *educational homogamy to increase with the level of education of the social origin*. Social origin entails a highly correlated conglomerate of characteristics, such as wealth, income, prestige, education, etc.,

which in turn positively correlates with the educational attainment of the children. This not only makes *status differences* between groups with different levels of education *socially more important* but also makes the *barriers* between the social circles defined by educational levels *increasingly stronger*. One can therefore expect the *direct effect of social origin on homogamy to be stronger the higher the level of education of the parents*, since the social networks thereby become more exclusive.

Studies on educational attainment show that the expansion of education has opened up higher education to disadvantaged children *in absolute numbers across cohorts but without having significantly improved the relative opportunities* related to social origin (see also Blossfeld/Shavit 1993; Müller/Karle 1993; Müller/Haun 1994; Henz/Maas 1995; Erikson/Jonsson 1996). This implies that the probability to meet children from more disadvantaged social classes falls (rises) with the level of education attained. Therefore, one can assume the following *four indirect effects of social origin on the choice of friends and marriage decisions*: (1) The possibility of associating with an equally qualified partner in the educational system is the highest if the level of education of the men and women corresponds to that of the family of origin. In this case the social networks of the family of origin and the social networks developing within the educational system will overlap and mutually reinforce each other. (2) Those men and women who experience upward social mobility in educational attainment with respect to their family will establish new social relationships. And since these individuals will not only prefer partners with the same education but will also work toward securing this new status, the likelihood of educational homogamy will also increase. However, these men and women also retain their social origin. That is, they probably remain in close contact with those people dear to them from their social origin (friends, acquaintances, relatives, etc.) over a considerable period of time in their life (Blau 1994). Thus, we expect that this will increase the *likelihood* of finding a partner from his/her social origin and to *marry downwards*. The effect of social origin should - as elaborated above - play an important role, *particularly for traditionally oriented men*. It can furthermore partially explain the low proportion of hypogamy of women in Table 1. (3) Conversely, men and women who are *downward mobile in their educational attainment* with respect to their family of origin, will try to reach anew the status of their family of origin and they will therefore be *less inclined toward educational homogamy*. They will also have the chance to meet better educated partners through their *social networks related to their social origin* (friends, acquaintances, relatives, etc.) and again be more likely to *marry upwards*. This will especially be the case for *traditionally oriented women*. (4) Finally, in a purely structural sense, the likelihood is very small that men and women, who are upwardly (downwardly) mobile due to educational attainment, step up (down) the social ladder one step further, so to speak, by marrying further upwards (downwards). Such mobility is

difficult due to the lack of social networks established through social origin and/or through the educational process.

In summary, should children from (under)privileged classes succeed (or fail) in the course of their education to go beyond (or fall below) those educational attainment levels of their social origin, then there will be a *tendency of downward mobility by marriage* which will partially correct the individual achievements (or failures). On the other hand, there will also be a certain number of children from the underprivileged classes who will succeed *not only through education alone to be socially mobile but will also be able to secure this upward climb through educational homogamy*. These men and women are the *real beneficiaries of educational expansion*. The percentage of these marriages and its change across generations should thus be a good indicator of the *degree of social closure of intergenerational structures of social inequality*. The degree of this openness must be examined in an empirical analysis and this will be discussed in the following section.

Which tendencies do we expect with regard to the *expansion of education*? Since with respect to social origin the relative chances of educational attainment have not significantly changed, the relative probability of contacts between different social groups should have also largely remained stable. This does not seem very optimistic. However, the absolute number of underprivileged children that has managed to attain higher levels of education has risen in the course of educational expansion. This means that their *chances of meeting children from higher social classes has increased*. This should diminish the social barriers between children from different social classes and increase the probability of coupling among these children. Thus, the *direct effect of social origin* on educational hypergamy should decrease from cohort to cohort. The following empirical examination will show which of these partially opposing tendencies has been dominant.

4. Data, methods and variables

In the following we attempt to empirically evaluate the hypotheses formulated above on the relationship between social origin, educational career, and decision-making related to marriage. This study is carried out on the basis of the German Socio-Economic Panel (Sozio-ökonomischen Panels - SOEP). There is an ample number of descriptions available on SOEP data (cf. e.g. Krupp 1985; Hanefeld 1987; Rendtel 1988, 1989) which makes it unnecessary at this point to provide

more detailed information on this data set. The data allow us to reconstruct step by step the educational careers and the processes of entry into the first marriage in the life course of single men and women. For this purpose the retrospectively gathered biographical SOEP data has been used which have been updated by prospectively gathered data in the course of 11 panel waves (1984 - 1994). Since the aim is to obtain a long-term description of the changes in the marriage process, the analysis has been limited to *German* men and women in *West Germany*.

It is possible to model the interdependencies of the relationship between educational career and the marriage process with *causal-type* transition rate models (see Blossfeld/Rohwer 1995, 1996). Either of these processes can be specified as the *dependent*, the other then as the *independent* process. This is done with the help of *time-dependent covariates* in the model. The model has been conceptualized in the following way:

$$(1) \Delta X(t) \rightarrow \Delta r(t') \quad t < t'$$

At any point in time, t , after age 15 ($t_0 = 0$) in the life course of single men and women we examine how the change in educational attainment in the respective past (i.e. before t) lead to a change in the transition rate of marriage ($\Delta r(t')$) in the present and the future. This modelling requires that we take the temporal order in which these processes evolve very seriously.

In our analysis the transition rate of marriage or the inclination to marry is the dependent variable:

$$(2) r(t) = \lim_{t' \rightarrow t} \frac{P(t \leq T < t' | T \geq t)}{t' - t}$$

whereby $P(\cdot)$ is the probability that a man or a woman marries in the time interval $[t, t']$, at age t , given that he/she is still single at t , that is, in the interval from 0 to t (see Blossfeld/Hamerle/Mayer 1989; Blossfeld/Rohwer 1995). The observation of the marriage process begins for each individual at the age of 15 and ends at the event of the first marriage, at the age of 60 (right censored), or the last panel interview in 1994 (right censored).

To model the marriage rate, we use an exponential model with time-constant (X_1) and time-dependent ($X_2(t)$) covariates with three destination states (competing risks; see Blossfeld/Rohwer 1995):

$$(3) r(t|X_1, X_2(t))_{jk} = \exp(\beta_{jk} X_1 + \beta'_{jk} X_2(t)) \quad \text{with: } j=0 \text{ (single); } k=1,2,3$$

This means that the individuals are at first single (origin state) and at time of marriage they can make a transition into three destination states: (1) husband's/wife's educational attainment is higher than that of the wife's/husband's at the time of marriage (upward marriage: $k = 1$); (2) husband's/wife's educational attainment is about the same as wife's/husband's at the time of marriage (homogamous marriage: $k = 2$); and (3) husband's/wife's educational attainment is lower than that of the wife's/husband's at the time of marriage (downward marriage: $k = 3$). The relations "higher", "lower" and "equal" are based on the classification of education with four hierarchically structured levels that were introduced above (see the discussion in connection with Table 1)

The covariables used in our longitudinal analysis have been defined as follows:

(1) *Non-monotonic age dependence of the marriage process*: On modelling the non-monotonic dependence on age of the transition rate of first marriage, the combination of two variables are used (see in detail Blossfeld/Huinink (1989) or Blossfeld/Jaenichen (1990)). i marks the index of the i -th year since the age of 15:

$$\text{Log}(D_i) = \text{Log}(\text{Current Age} - 15)$$

$$\text{Log}(R_i) = \text{Log}(60 - \text{Current Age})$$

As a result the exponential model contains the following term:

$$(4) \exp(\log(D_i) * \beta' + \log(R_i) * \beta'') = D_i^{\beta'} * R_i^{\beta''}$$

(2) *Educational attainment level*: In order to model the educational attainment in the life course of women and men dynamically we use the average number of years, which are necessary to attain a certain level of education (see Blossfeld 1985): lower secondary schooling (Hauptschule) without vocational training (HOB) = 9 years; intermediate schooling (Mittlere Reife) without vocational training (MOB) = 10 years; lower secondary schooling (Hauptschule) with vocational training (HMB) = 11 years; intermediate schooling (Mittlere Reife) with vocational training (MMB) = 12 years; higher secondary schooling (Abitur) without vocational training (ABI) = 13 years; higher secondary school qualifications (Abitur) with vocational training (ABIMB) = 15 years; specialized technical college degree (Fachhochschule) (FHS) = 17 years and university degree (UNI) = 19 years. In our analysis educational attainment is a time-dependent covariable. Depending on the educational career, this variable contains the educational qualification level at each point in time over the life course. The value changes simultaneously with the achievement of new educational attainment levels corresponding to the number of years of education.

(3) *Interaction of educational attainment with age*: These two variables take into account that the tendency to marry depends on level of education and age. We therefore include the following two interaction variables in our models to control this effect: $\langle \text{Log}(\text{Current Age} - 15) * \text{Education} \text{ (dynamical)} \rangle$ und $\text{Log}(60 - \text{Current Age}) * \text{Education} \text{ (dynamical)}$.

(4) *Linear cohort trend*: Due to the expansion of higher education in the past four decades, the level of educational attainment has increased considerably. Younger birth cohorts show less differences in gender specific educational levels. The structural impact of this development is the increasing opportunity for the members of younger generations to marry homogamously. To control the decreasing difference in the marginal distribution, we include the linear cohort effect as an indicator variable, which assigns to each five-years-cohort a value of 1 (oldest cohort) to 11 (youngest cohort).

(5) *Duration in school*: In the educational system, pupils and students undergo a stepwise process of selection. The longer the time that they spend in the educational system, the more homogamous the surrounding population will be with respect to the educational level. This process is modelled

by the time dependent variable *Time in Education*. At the age of 15 the value of this variable starts with 0 and increases continuously for each year spent in the educational system by 1 until leaving the school system. After the educational system is left, the value of the variable is set to 0, because the individuals are no longer part of the educationally homogeneous networks.

(6) *Not in School*: With regard to our theoretical explanations, juveniles and young adults will not be "willing" to marry as long as they remain in the educational system. They will postpone marriage until they leave school. This process of postponing and catching up is modelled by two different covariables: (1) the time dependent dummy variable *Not in School* (1/0-coding: reference category: In School), given the value "1", if a man or a woman has left the educational system, otherwise "0"; and (2) a set of seven time-dependent dummy variables, which assign smaller time intervals after leaving the educational system to "1" otherwise "0" (reference category: In School): *1-2 Years After School, 3-4 Years After School, ... , 11-12 Years After School, >12 Years After School*. This way it is possible to control for any kind of time dependent tendency to marry (e.g. smaller periods of catching up) after the individuals leave school.

(7) *Duration Since Leaving School*: The more time that has passed since leaving the educational system, the more heterogeneous the social networks will be. We included this effect linearly to our models by using the variable *Duration Since Leaving School*. With each year that has passed after leaving school, the value of the variable increases by "1".

(8) *Main effect of social origin: father's educational attainment*: For modelling the *main* effect of social origin, we use the variable *Father's Education*. This variable corresponds to the differentiated classification of education of women and men as we described in section (2).

(9) *Change in main effect of social origin*: To describe the changes in the effect of social origin on spouse selection intergenerationally we included the interaction variable: *Father's Education * Linear Cohort Trend*.

(10) *Indirect effects of social origin:* An important aspect in our theoretical explanation of spouse selection is the indirect effect of social origin. The relation of educational levels of father and daughter/son effects the tendency to marry homogamously or heterogamously. We controlled this effect in our models by a set of three dummy variables. These variables contain the relation between father's and daughter's/son's educational level corresponding to each point in time: (1) father's educational level is lower than daughter's/son's; (2) father's educational level is equal to daughter's/son's; and (3) father's educational level is higher than daughter's/son's. For these variables we used centered effects. These effects show the difference to a hypothetical common mean (the sum of all effects of one variable signs 0).

5. Results

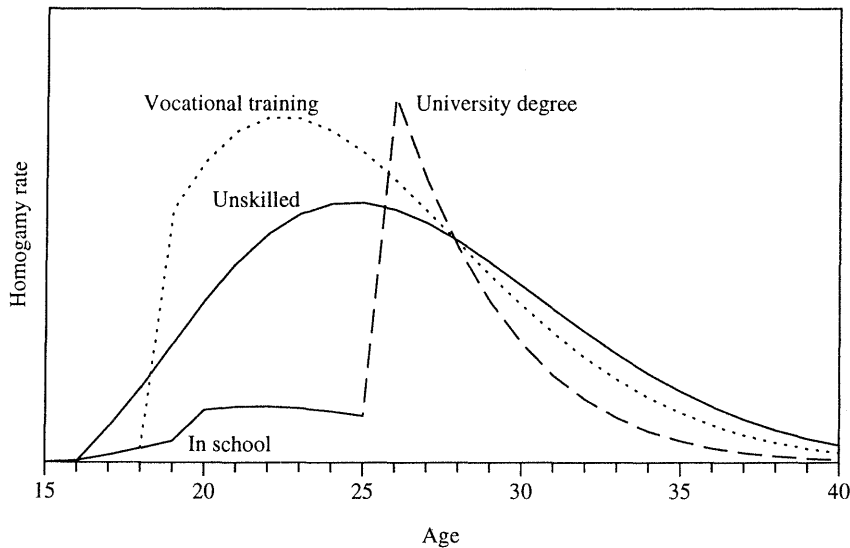
We begin our longitudinal analysis with a description of the homogamy rates over the life course. We estimated these rates for single men (Figure 1) and women (Figure 2) with different levels of educational attainment (unskilled, with vocational training, with university degree). The resulting curves represent a simulation based on the coefficients of model 1 in Tables 2 and 3. These curves clearly show that there is no simple general age-specific marriage rate as was assumed, for example, in Blossfeld/Huinink (1989), Blossfeld/Jaenichen (1990) or Blossfeld (1995). The curves rather show that there is an interaction between educational attainment level and age. These education- and age-specific homogamy rates across the life course take into account whether the individual is still in school, when he/she leaves school and with which qualification level the individual is leaving the educational system. That is, the education- and age-specific homogamy rates are estimated on the basis of the time-dependent covariables $\text{Log}(\text{Current Age} - 15)$, $\text{Log}(60 - \text{Current Age})$, $\text{Log}(\text{Current Age} - 15) * \text{Education}$, $\text{Log}(60 - \text{Current Age}) * \text{Education}$, and $\text{Log}(\text{Not in School})$.¹⁰

In Figure 1, one can see that the process of homogamy for unskilled women *begins very early* and then stretches over a relatively long age span. This implies that women enter the employment system at a relatively early age and are consequently (consciously or latently) "prepared to marry"

¹⁰ Models of the age- and education-specific influences were more difficult to estimate for the men than for the women. In order to estimate an adequate model, the time-dependent covariable "*time after leaving the educational system*" had to additionally be included in Model 1 in Table 3 in contrast to the model for women in Table 2.

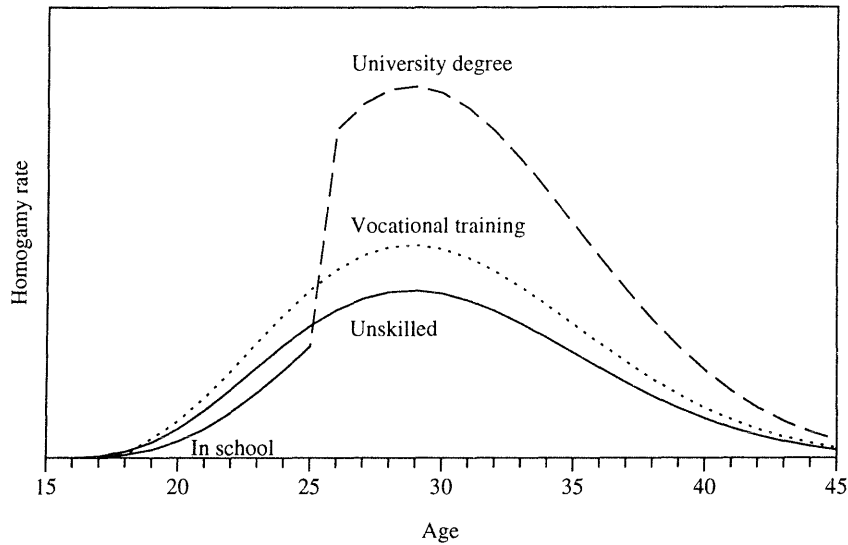
at a younger age. In contrast, the inclination of women of the same age who remain in education to marry homogamously is *very low*. Not until these women have *also left the educational system* does their *rate of marriage suddenly rise*. And, moreover, the increase is *greater* the higher the women's level of qualification; this abrupt rise is partially due to having *remained longer in education* and *delayed the decision to marry*. In the simulation women with vocational training leave the educational system at the age of 18, with a university degree at the age of 25.¹¹ It can clearly be shown that for women the *inclination to marry homogamously* is dependent on educational attainment as well as partaking in the educational system. This is particularly true and stronger for women *right after completion of education* and *even more so for those who graduated from university*.

Figure 1: Educational Homogamy Rates of Women



¹¹ In order to estimate the rate of homogamy using time-dependent covariables, the time of completion of qualification must of course be given.

Figure 2: Educational Homogamy Rates of Men



A similar picture emerges for men (Figure 2). In contrast to the women, it is characteristic that the inclination to marry homogamously *did not significantly differ* between the *unskilled men* who left the educational system early and those who continued on. The tendency to marry is relatively low for both groups. For unskilled men it is difficult or even impossible to start a family at a young age. For one, they are less attractive as spouses because of a low level of education and correspondingly low income chances. Secondly, due to their low income, they are seldom capable of overcoming financial hurdles related to starting a family at a young age. But it is true that the *rate of educational homogamy increases with the level of educational attainment*. Above all a very strong tendency to educational homogamy is visible for university graduates, especially right after leaving school. The steeper course of educational homogamy for women with university degrees (Figure 1) compared to men with university degrees (Figure 2) can be partially explained by the still existent gender-specific role definitions in society. For male university graduates, a phase of establishing a foothold in an occupation is important before marriage; for female university graduates, this is less important, so that they tend to marry right after leaving the university.

The rates of groups with different levels of educational attainment could be considered initial indicators of the effect that the institutional structures in education have upon individual's decisions to marry homogamously. The high degree of time dependency in patterns of marriage can emerge as a result of a specific organizational structure of educational institutions and the related interplay of different, partially opposing, time-dependent forces.

Time-dependent effects of the educational system on marriage patterns

We now use more direct indicators of these time-dependent forces of the educational trajectory on the process of assortative mating.

1. *The effect of stepwise selection in the educational system.* In the theoretical section of this paper, we argued that increasingly homogamous populations are created from one educational attainment level to the next. Within each generation the *less qualified have left the qualification process earlier*. Therefore, those young women and men who have *stayed together longer* have attained a *similar* or, perhaps later, a *higher* level of education. The structural possibilities of developing a relationship with a similar or (later) higher qualified partner, and then possibly to marry that person, should therefore increase the longer the time spent in education. In models 2 and 3 of Tables 2 and 3, this process has been modelled by taking the covariable "*Duration in School*" into account. It is shown that this covariable for women and men has the expected *significant positive effect on homogamy and upward marriage*, whereas its *effect on downward marriage is not significant*. Thus, the more time women and men spend in the educational system, the greater the chance of marrying a partner with similar or (later) higher qualifications.

2. *Participation in the educational system and postponement of marriage.* A second hypothesis put forth was that attending school or university or the completion of vocational training brings on a *high degree of dependency* upon parents or the state. Students often consider themselves still "*not prepared*" to raise a family. The completion of education therefore represents an important step in the status passage into adulthood and is in this sense interpreted as a *requirement for entry into marriage*. Model 2 in Tables 2 and 3 shows that the covariable "*Not in School*" has the expected effect. The inclination to marry for men and women clearly rises after completion of education with respect to homogamous and upward marriages.

Table 2: Transition Rate Models for Upward, Downward and Homogamous Marriages With Regard to Educational Attainment Level of Women

Variable	Upward Marriage			Homogamous Marriage			Downward Marriage		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Constant	-55.28**	-50.89**	-42.73**	-41.92**	-48.99**	-32.86**	-50.81**	-39.81 *	-52.03**
Log(Current Age - 15)	-0.33	0.06	0.24	4.12**	3.43**	3.89**	1.91 *	2.11 *	1.69
Log(60 - Current Age)	15.95**	13.67**	11.38**	7.54**	8.95**	4.11**	9.52**	7.46	11.16
Log(current age - 15) * Education	0.38**	0.32**	0.28**	-0.19**	-0.13**	-0.23**	0.02	0.02	0.11
Log(60 - current age) * Education	-0.36**	-0.29**	-0.27**	0.14**	0.07**	0.14**	0.09	0.07	0.01
Not in School ¹⁾	0.39	2.66**		1.95**	3.85**		2.59**	0.55	
Duration in School ²⁾		0.28**	0.28**		0.30**	0.32**		-0.28	-0.29
Duration Since Leaving School ³⁾		-0.02			0.03			-0.09	
1 - 2 Years After School ⁴⁾			2.48**			3.74**			0.53
3 - 4 Years After School ⁴⁾			2.58**			4.24**			-0.22
5 - 6 Years After School ⁴⁾			2.56**			4.45**			-0.45
7 - 8 Years After School ⁴⁾			2.48**			4.38**			-0.02
9 -10 Years After School ⁴⁾			2.36**			4.11**			-0.03
11-12 Years After School ⁴⁾			2.33**			3.93**			-1.07
More than 12 Years After School ⁴⁾			1.74 *			3.73**			-0.72
Father's Education		-0.09	-0.10		0.17**	0.15**		-0.12	-0.10
Father's Education * Linear Cohort Trend		-0.02	-0.02		-0.15	-0.14		0.08	0.05
Father's Edu < Daughter's Edu ⁵⁾		-0.32**	-0.33**		0.37**	0.32**		0.76 *	0.81 *
Father's Edu = Daughter's Edu ⁵⁾		-0.37**	-0.37**		0.39**	0.39**		1.03 *	1.03 *
Father's Edu > Daughter's Edu ⁵⁾		0.69**	0.70**		-0.76**	-0.71**		-1.79 *	-1.84 *
Linear Cohort Trend		1.59	1.58		3.28**	3.13**		-0.83	-0.49
Number of Events	727	727	727	1250	1250	1250	105	105	105
Subepisodes	48681	48681	48681	48681	48681	48681	48681	48681	48681
Likelihood Ratio Test (LR) ⁶⁾	2699.28	3127.86	3199.32	2699.28	3127.86	3199.32	2699.28	3127.86	3199.32
Degrees of Freedom	5	13	18	5	13	18	5	13	18

¹⁾ Reference Category: In School. ²⁾ Measured in Numbers of School Years After Age 14. ³⁾ Measured in Number of Years After Leaving School.

⁴⁾ Dummy Variable (Reference Category: In School). ⁵⁾ Centered Effects. ⁶⁾ LR = 2*(LogLikelihood(Model with covariables) - (LogLikelihood(Model without covariables))).

** p ≤ .01

* p ≤ .05

Source: Socio-Economic Panel, Waves 1984-94

Table 3: Transition Rate Models for Upward, Downward and Homogamous Marriages With Regard to Educational Attainment Level of Men

Variable	Upward Marriage			Homogamous Marriage			Downward Marriage		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Constant	-29.09**	-22.48**	-34.03**	-34.85**	-39.88**	-36.04**	-40.06**	-35.91**	-29.17**
Log(Current Age - 15)	1.24	1.02	0.71	4.11**	3.64**	3.94**	2.46**	2.56**	2.75**
Log(60 - Current Age)	9.09**	5.98**	9.17**	6.73**	7.65**	6.21**	7.65**	6.95**	4.72**
Log(Current Age - 15) * Education	0.39**	0.29**	0.35**	-0.05	-0.02	-0.08 *	0.05	0.04	-0.02
Log(60 - Current Age) * Education	-0.49**	-0.31**	-0.33**	-0.01	-0.04	0.01	0.01	0.01	0.07 *
Not in School ¹⁾	-0.12	2.58**		0.97**	1.88**		1.99**	1.61	
Duration in School ²⁾		0.27**	0.28**		0.11 *	0.13**		-0.01	0.02
Duration Since Leaving School ³⁾	-0.26**	-0.19**		-0.08**	-0.03		0.01	-0.02	
1 - 2 Years After School ⁴⁾			-6.80			1.43**			1.68
3 - 4 Years After School ⁴⁾			2.00			1.88**			1.62
5 - 6 Years After School ⁴⁾			1.93			2.04**			1.96 *
7 - 8 Years After School ⁴⁾			1.45			2.02**			2.06 *
9 -10 Years After School ⁴⁾			1.19			1.81**			1.84
11-12 Years After School ⁴⁾			1.03			1.62**			1.93
More than 12 Years After School ⁴⁾			-0.05			1.31**			1.34
Father's Education		-0.29	-0.29		0.16**	0.15**		-0.09	-0.10
Father's Education * Linear Cohort Trend		0.02	0.02		-0.18 *	-0.18 *		0.06	0.08
Father's Edu < Son's Edu ⁵⁾		-0.76**	-0.76**		0.28**	0.25**		0.17 *	0.13 *
Father's Edu = Son's Edu ⁵⁾		-0.51**	-0.52**		0.11**	0.10**		0.42 *	0.41 *
Father's Edu > Son's Edu ⁵⁾		1.27**	1.28**		-0.39**	-0.35**		-0.59 *	-0.54 *
Linear Cohort Trend		-0.48	0.47		2.77**	2.70**		-2.52 *	-2.71 *
Number of Events	105	105	105	1250	1250	1250	727	727	727
Subepisodes	48637	48637	48637	48637	48637	48637	48637	48637	48637
Likelihood Ratio Test (LR) ⁶⁾	2446.32	2675.94	2749.76	2446.32	2675.94	2749.76	2446.32	2675.94	2749.76
Degrees of Freedom	6	13	18	6	13	18	6	13	18

¹⁾ Reference Category: In School. ²⁾ Measured in Numbers of School Years After Age 14. ³⁾ Measured in Number of Years After Leaving School.

⁴⁾ Dummy Variable (Reference Category: In School). ⁵⁾ Centered Effects. ⁶⁾ LR = 2*(LogLikelihood(Model with covariables) - (LogLikelihood(Model without covariables)).

** p ≤ .01

* p ≤ .05

Source: Socio-Economic Panel, Waves 1984-94

3. *Leaving the educational system and entering into more heterogeneous environments.* Our third hypothesis concerning the educational system was that men and women enter more heterogeneous environments upon leaving school. Thus, it seems plausible to assume that the *tendency of educational homogamy falls* and the *tendency of educational heterogamy increases the longer a person has been out of school*. Model 2 in Table 2 shows that this *linear* connection does not hold true for women; and for men this *linear* connection can only be observed in Model 2 of Table 3 for upward marriages. The reason for this result could be due to the fact that the connection between homogamy tendency and time duration after leaving school is *not linear* but has the form of a parabolic curve, as there is not only a postponement but also a catching up process (see Figures 1 and 2).

4. *Educational participation and catching up effects in marriage decisions.* Because students in the educational system (especially those at a higher level in education) *increasingly postpone* family formation in school, they often catch up after leaving school and enter into marriage fast, with those partners that they entered relationships with while they were still in school. In other words, after leaving the educational system, the tendency to marry homogamously should *first increase* because those relationships that were formed in school gradually will be turned into marriages, and only afterwards does the tendency to marry homogamously start to *decrease* due to the increasing influence of educationally heterogeneous environments. We therefore use in Model 3 a sequence of time-related dummy variables describing this non-monotonic pattern in a flexible way. The coefficients in Model 3 for the seven time-dependent dummy variables *1-2 Years After School, ..., 11-12 Years After School, > More than 12 Years After School* show that the tendency to be homogamous for men and women right after exiting from education really does strongly increase and then decreases afterwards (Tables 2 and 3). These non-monotonic relationships also seem to portray the tendency of women to marry upwards. Here, we first observe a strong increase and then a fall the longer that women have been out of school. For downward marriages, we cannot ascertain any sort of postponement and catching up effect.

5. *Educational homogamy and educational heterogamy across generations.* We now consider the development of marriage patterns of cohorts. From Table 1, we know that the tendency of cohorts to be homogamous has continually been increasing. With this in mind, we now pose the following question: Is this just the result of the changes in educational participation in the life course from cohort to cohort and therefore an effect of *changed opportunities for contact to similarly and higher qualified people*? Or is a purely structural effect also present because *the educational distribution of men and women has become increasingly similar*, so that structurally there must

be more homogamous marriages? To answer these questions, we have added the covariable *Linear Cohort Trend* to the model. It can be seen in Model 3 that the coefficients of this covariable are positive and highly significant for homogamous marriage for both men and women (Tables 2 and 3). *Thus, educational homogamy is partly structurally produced by a change in sex-specific differences.* The same is true for the tendency of men to marry downwards. The covariable *Linear Cohort Trend* has a significant negative effect for men who marry downwards (Table 3).

Effects of social origin and their changes

Direct effects of social origin and their changes.¹² In the theoretical part of this paper we argued that the *direct effect of social origin on educational homogamy should increase with the educational level of the father.* This should be the case because social origin is a conglomerate of various highly correlated characteristics, such as wealth, income, prestige, etc., which are positively correlated with education and make variations between different educational groups not only more socially relevant but also reinforce the barriers between social groups. In Tables 2 and 3 it is shown that that hypothesis seems true. There is a significant positive effect of the father's educational attainment level on the tendency to marry homogamously for both women and men. Thus, social groups will be closed more and more with increasing social origin.

Has the *direct effect of social origin changed in the course of modernization?* In the theoretical part of our paper, we had to leave this question open due to its dependency on two contrary tendencies whose result only can be empirically determined. On the one hand, with respect to the *effect of class-specific educational opportunities* not much has changed as a result of educational expansion (Shavit/Blossfeld 1993) so that the relationship between social groups in the educational system has hardly been touched. But on the other hand, the *absolute number of children from lower social classes has increased* due to the expansion of the educational system itself. More children have been able to reach a higher level of education. *Therefore, the possibilities of*

¹² In examining the effects of social origin, we experimented with the socioeconomic status and educational level of the father. We found that the effect of the socioeconomic status of the father disappears when his educational level is considered in the analysis. Because both indicators of social origin are highly correlated and capture the influence of social origin, we only examined father's educational level as an indicator for social origin.

coming into contact and entering relationships with children from different social classes have increased through educational expansion and this could have decreased the direct effect of social origin. In order to test this effect, we included the interaction variable *Father's Education * Linear Cohort Trend* to the models. The coefficients of this interaction variable in Models 2 and 3 are not significant for all women (Table 2). This means that the *direct effect of social origin has remained relatively unchanged for women* across generations but it has *decreased significantly* for men (Models 2 and 3 in Table 3). For men, educational expansion seems to have an equalizing effect.

Indirect effects of social origin. As a last step, we discuss the *indirect effects of social origin resulting from sons' and daughters' educational career*. These influences are modelled by three time-dependent dummy variables (*Father's Education < Son's/Daughter's Education*; *Father's Education = Son's/Daughter's Education*; *Father's Education > Son's/Daughter's Education*; the current highest educational level of the son/daughter is compared to his/her father's). To make interpretation easier, *centered effects* have been employed, meaning that the effects represent the individual differences to a general mean (the sum of the effects for the three variables is zero).

In the theoretical part of the paper, we initially assumed that the probability of a son/daughter marrying an *equally qualified partner* is especially high if the *daughter/son have the same educational level as the father*. This is because the social networks of the family of origin and the networks mediated through the educational system complement and strengthen each other. Models 2 and 3 of Tables 2 and 3 show that we find this effect for homogamous marriages. The coefficients of the dummy variables *Father's Education = Daughter's/Son's Education* are positive and highly significant.

Additionally, we formulated in the theoretical part of the paper the hypothesis that those sons and daughters who are educationally upwardly mobile establish new social interests through school. Because these individuals not only prefer finding a partner with the same educational level but also want to secure their new social status, there is a high probability that they will marry homogamously with regard to education. Models 2 and 3 of Tables 2 and 3 reflect this argument. The coefficients of the dummy variables *Father's Education < Daughter's/Son's Education* are with respect to homogamous marriages both positive and highly significant.

Concerning upwardly mobile men and women, who achieve a level of education higher than that of social origin, we assume that they will continue to stay in contact with the people with whom

they grew up with (friends, acquaintances, relatives, etc.) for a considerable period of time. Therefore, it is highly likely that these men and women will meet a person from their social origin and marry downwards. Models 2 and 3 of Tables 2 and 3 support this hypothesis for downward marriage. The coefficients of the dummy variables *Father's Education < Daughter's/Son's Education* have a significant positive effect on the downward marriage.

We also assumed that downwardly mobile men and women, who achieve a level of education lower than that found in social origin, will show less of a tendency to marry an educationally homogamous partner. Models 2 and 3 of Tables 2 and 3 are in accordance with this hypothesis concerning homogamous marriage. The coefficients of the dummy variables *Father's Education > Son's/Daughter's Education* have a significant negative effect on the homogamous marriage.

On the other hand, men and women with lower educational attainment than found in their social origin, also have the opportunity to meet a better educated person of the opposite sex through their *social network of the family of origin* and can therefore *marry upward* (see Models 2 and 3 of Tables 2 and 3). The coefficients of the dummy variables *Father's Education > Son's/Daughter's Education* have a significant positive effect on downward marriage. This pattern is more pronounced for women than for men.

Finally, we formulated the hypothesis that in a purely structural sense it is quite unlikely that with reference to educational attainment upwardly or downwardly mobile men and women will marry upwards or downwards, as it is not possible for them to gain from their social network of the family of social origin or from the social network that they acquired via the educational system. Models 2 and 3 of Tables 2 and 3 also show that this hypothesis is true. The coefficients of the dummy variables *Father's Education < Daughter's/Son's education (Father's Education > Daughter's/Son's Education)* have a significant negative effect on upward and downward marriage.

In summary, we would like to stress two points: 1) Sons and daughters who have exceeded (not attained) the educational level of their family of origin show the *tendency of countermobility through marriage and correct their individual educational success (or educational failure)*. This means that the social inequality of the family of origin does succeed in the end. But there is also an opposite tendency. 2) Sons and daughters who have climbed upwards due to individual effort want to consolidate their position by marrying an educationally homogamous member of the opposite sex. These young people are the winners of educational expansion. Change in this

proportion across generations is therefore an important indicator for the degree of openness or exclusiveness of intergenerational inequality structures. For daughters, the proportion has increased from 6% (1919-1933 cohort) to 14% (1949-1963 cohort) and for sons from 9.2% (1919-1933 cohort) to 13.5% (1949-1963 cohort). In other words, the effect of educational expansion seems to have been very weak in opening social circles and loosening marriage patterns.¹³

6. Summary and conclusions

The aim of this study was to investigate the effects of the educational system and educational expansion on marriage patterns in West Germany. We carried out our analysis by reconstructing the marriage process of single German men and women; we then compared the marriage patterns of successive birth cohorts over the past 50 years.

Our description of the development of educational homogamy across birth cohorts has firstly shown a *strong long-term trend towards more educational homogamy*. This trend is, on the one hand, “structural” due to an increasing equality of educational opportunities of men and women across cohorts and, in part, a consequence of social networks that are structured by educational institutions. Second, the proportion of traditionally upward marrying women has sharply decreased across birth cohorts although it is still quite popular amongst the youngest cohorts, making up one-fifth of all marriages. Finally, it has been shown that there has always been a small percentage of men and women who have not married in accordance with the traditional pattern. These women married less qualified men (or these men married better educated women). It was quite surprising that the probability of younger women to marry a less qualified man has not increased, though in comparison to men, younger women have profited from educational expansion far more.

Increasing educational homogamy across cohorts does not support the idea of a general, long-term trend leading to individualization in the course of the modernization process (Beck 1986; Hradil 1987). Instead, the development of educational homogamy across cohorts demonstrates an *increasing closure of social structure and social networks* (see Teckenberg 1991). Higher or

¹³ For a detailed description of educational level of marriage partners in correlation with social origins, see Blossfeld and Timm (1997). The confines of this paper do not permit us to elaborate here.

lower educated men and women pool their good and bad sociocultural and economic resources. Of course, for modernization and individualization theorists, such results present a problem that is very difficult to explain. It is our view that the *wrong prediction of empirical development* by these social scientists is mainly a result of their assumption that social macro-developments can only be explained by abstract developmental logics and do not take the changing structural conditions for action as well as individual aims, orientations and expectations, that is, the micro-foundation, into serious consideration (see also Goldthorpe 1996).

Our micro-/macro longitudinal analysis with respect to choice of partner in the life course shows that the educational system has become an increasingly important marriage market, particularly for those who are highly qualified. Educational homogamy increases with the duration that a man or a woman stays in school. Since the duration of schooling has been increasing from birth cohort to birth cohort, a rising educational homogamy has been the result. The tendency to marry an educationally homogamous partner is especially pronounced right after leaving school and increases the higher one's educational level. This is especially the case because higher qualified men and women (1) increasingly stay in an educationally homogeneous environment and (2) postpone marriage until they finish school. The longer that they are out of the educational system, the less likely it is that they will enter an educationally homogamous marriage because they increasingly live in an educationally heterogeneous environment.

Furthermore, our analysis showed that the better situated that parents are, the stronger the direct effect of social origin on educational homogamy, as social circles become more exclusive in higher social classes. The direct effect of social origin remained quite constant for women across cohorts, but we noticed a slight decrease in this effect for men.

Some indirect effects of social origin deserve special mention. Those sons and daughters who exceeded the educational level of their family of origin (or failed to attain this level) showed a tendency of countermobility through marriage, which in part corrected individual educational success or failure. However, there is also a small, but slowly increasing proportion of sons and daughters who have managed to move up intergenerationally through individual efforts and have been able to consolidate that level by marrying homogamously with regard to education.

In summary, our empirical results for West Germany do not show that there is a greater openness of social groups through *marriage within the course of modernization and individualization*

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process. On the contrary, educational homogamy has strongly increased across cohorts and social structure and social circles seem to be more closed than ever.

It is interesting to note that most young men and women are probably not aware of the effect of opportunity structures provided by the educational system and the effect of social origin on marriage decisions. If you ask men about their ideal partner, they mostly answer that she should have blond hair and blue eyes, smoke (or be a non-smoker); if you ask women about their ideal man, they usually say that he should have black hair, be over 1.80 m, smoke (or be a non-smoker) etc. This means that the intragenerational and intergenerational reproduction of social inequality subconsciously prevails though inconspicuously. We therefore must question the sociological value of empirical studies that only collect data on individual preferences.

References

- Beck, Ulrich*, 1986: Risikogesellschaft. Frankfurt a.M.: Suhrkamp.
- Becker, Gary S.*, 1981: A treatise on the family. Cambridge: Harvard University Press.
- Becker, Rolf*, 1993: Staatsexpansion und Karrierechancen. Berufsverläufe im öffentlichen Dienst und in der Privatwirtschaft. Frankfurt a.M./New York: Campus.
- Bell, Daniel*, 1975: Die nachindustrielle Gesellschaft. Frankfurt a.M.: Campus.
- Blau, Peter M.*, 1964: Exchange and Power in Social Life. New York: Wiley.
- Blau, Peter M.*, 1977: A Macrosociological Theory of Social Structure, American Journal of Sociology Vol. 83 Nr. 1: 26-54.
- Blau, Peter M.*, 1994: Structural contexts of opportunities. Chicago und London: University of Chicago Press.
- Blau Peter M.*, und *Otis Dudley Duncan*, 1967: The American Occupational Structure. New York: Wiley.
- Blossfeld, Hans-Peter*, 1985: Bildungsexpansion und Berufschancen. Frankfurt a.M./New York: Campus.
- Blossfeld, Hans-Peter*, 1989: Kohortendifferenzierung und Karriereprozeß. Eine Längsschnittanalyse über die Veränderung der Bildungs- und Berufschancen im Lebenslauf. Frankfurt a.M./New York: Campus.
- Blossfeld, Hans-Peter*, 1990: Changes in educational careers in the Federal Republic of Germany, Sociology of Education 2: 105-177.
- Blossfeld, Hans-Peter*, 1995: The new role of women. Family formation in modern societies. Boulder (C.O.): Westview Press.
- Blossfeld, Hans-Peter*, 1996: Macro-sociology, Rational Choice Theory, and Time. A Theoretical Perspective on the Empirical Analysis of Social Processes, European Sociological Review 2: 181-206.
- Blossfeld, Hans-Peter, Karl Ulrich Mayer*, 1988: Arbeitsmarktsegmentation in der Bundesrepublik Deutschland - Eine empirische Überprüfung von Segmentierungstheorien aus der Perspektive des Lebenslaufs, Kölner Zeitschrift für Soziologie und Sozialpsychologie, 40. Jg.: 245-261.
- Blossfeld, Hans-Peter, Alfred Hamerle und Karl Ulrich Mayer*, 1989: Event History Analysis. Statistical theory and application in the social sciences. Hillsdale, New Jersey: Lawrence Erlbaum Associates.
- Blossfeld, Hans-Peter, und Johannes Huinink*, 1989: Die Verbesserung der Bildungs- und Berufschancen von Frauen und ihr Einfluß auf den Prozeß der Familienbildung, Zeitschrift für Bevölkerungswissenschaft Bd. 15: 383-404.
- Blossfeld, Hans-Peter, und Reinhard Nuthmann*, 1989: Strukturelle Veränderungen der Jugendphase zwischen 1925 und 1984 als Kohortenprozeß, Zeitschrift für Pädagogik 35: 845-867.

The Educational System as a Marriage Market

- Blossfeld, Hans-Peter, und Ursula Jaenichen, 1990: Bildungsexpansion und Familienbildung. Wie wirkt sich die Höherqualifikation der Frauen auf ihre Neigung zu heiraten und Kinder zu bekommen aus, Soziale Welt 4: 454-476.*
- Blossfeld, Hans-Peter, und Götz Rohwer, 1995: Techniques of Event History Modeling. New Approaches to Causal Analysis. Mahwah, New Jersey: Erlbaum.*
- Blossfeld, Hans-Peter, und Götz Rohwer, 1996: Causal Analysis in the Social Sciences and Event History Modelling. Paper prepared for the Workshop "Statistical Issues in Sociology". Oxford, November 14-16: University of Bremen (mimeo).*
- Blossfeld, Hans-Peter, und Catherine Hakim, 1997, im Druck: Between Equalization and Marginalization. Part-Time Working Women in Europe and the United States of America. Oxford: Oxford University Press.*
- Blossfeld, Hans-Peter, und Rolf Müller, 1997, im Erscheinen: Sozialstrukturanalyse, Rational Choice Theorie und die Rolle der Zeit. Ein Versuch zur dynamischen Integration zweier Theorieperspektiven, Soziale Welt.*
- Blossfeld, Hans-Peter, und Andreas Timm, 1997: Das Bildungssystem als Heiratsmarkt. Eine Längsschnittanalyse der Wahl von Heiratspartnern im Lebenslauf, Sfb 186 Arbeitspapier Nr. 43: Universität Bremen.*
- Richard Brown (Hg.): Knowledge, Education and Cultural Change. London: Tavistock.*
- Bourdieu, Pierre, und Jean-Claude Passeron, 1964: Die Illusion der Chancengleichheit. (Deutsch 1971). Stuttgart: Klett.*
- Bourdieu, Pierre, und Jean-Claude Passeron, 1977: Reproduction in Education, Society and Culture. Beverly Hills: Sage.*
- Bowles, Samuel, und Herbert Gintis, 1976: Schooling in Capitalist America. New York: Basic Books.*
- Collins, Randall, 1971: Functional and Conflict Theories of Educational Stratification, American Sociological Review Vol. 36 Nr. 2: 1002-1019.*
- Curtis, Richard F., 1986: Household and Family in Theory on Inequality, American Sociological Review Vol. 51: 168-183.*
- Eggebeen, David J., und Alan J. Hawkins, 1990: Economic Need and Wives' Employment, Journal of Family Issues 11: 48-66.*
- Elster, Jon, 1979: Ulysses and the Sirens. Cambridge: Cambridge University Press.*
- Elster, Jon, 1989a: Solomonic Judgements. Studies in the Limitations of Rationality. Cambridge: Cambridge University Press.*
- Elster, Jon, 1989b: The Cement of Society. Studies in Rationality and Social Change. Cambridge: Cambridge University Press.*
- Erikson, Robert, und John H. Goldthorpe, 1992: The Constant Flux. A Study of Class Mobility in Industrial Societies. Oxford: Clarendon Press.*
- Erikson, Robert, und Jan O. Jonsson, 1996: Can Education Be equalized? The Swedish Case in Comparative Perspective. Boulder, Colorado: Westview Press.*

The Educational System as a Marriage Market

- Featherman, David L., Dennis P. Hogan und Aaage B. Sörensen*, 1984: Entry into Adulthood. Profiles of Young Men in the 1950's. S. 159-202 in: *Paul B. Baltes, und Orville G. Brim* (Hg.): *Life-Span Development and Behavior* Bd. 6. Orlando: Academic Press.
- Frenzel, Hansjörg*, 1995: Bildung und Partnerwahl. S. 61-88 in: *ZUMA-Nachrichten* 36, 19. Jg.: Mannheim.
- Galler, Heinz P.*, 1979: Schulische Bildung und Heiratsverhalten, *Zeitschrift für Bevölkerungswissenschaft* 5: 199-213.
- Gambetta, Diego*, 1996: *Were They Pushed or Did They Jump?* Boulder, Colorado: Westview Press.
- Goldthorpe, John H.*, 1980: *Social mobility and class structure in modern Britain.* Oxford: Clarendon Press.
- Goldthorpe, John H.*, 1983: Women and class analysis: In defence of the conventional view, *Sociology* 17: 465-488.
- Goldthorpe, John H.*, 1996: Class analysis and the reorientation of class theory: The case of persisting differentials in educational attainment, *British Journal of Sociology* Volume no. 47 Issue no. 3.
- Goode, William J.*, 1974: Comment: The Economics of Nonmonetary Variables, *Journal of Political Economy* Vol. 82 Nr. 2 Part II: 1-14.
- Haller, Max*, 1982: *Klassenbildung und soziale Schichtung in Österreich.* Frankfurt a.M./New York: Campus.
- Handl, Johann*, 1988: *Berufschancen und Heiratsmuster von Frauen.* Frankfurt a.M./New York: Campus.
- Hannan, Michael T., Klaus Schömann und Hans-Peter Blossfeld*, 1990: Sex and sector differences in the dynamics of age growth in the Federal Republik of Germany, *American Sociological Review* 55: 694-713.
- Hannan, Michael T., Klaus Schömann und Hans-Peter Blossfeld*, 1995: The Segmentation of Transitions from School to Work in Postware Germany: A Dynamic Perspective, *Comparative Social Research*, Volume 15: 103-127.
- Hanefeld, U.*, 1987: *Das Sozio-ökonomische Panel. Grundlagen und Konzeption.* Frankfurt a. M./New York: Campus.
- Heiner Ronald A.*, 1983: The Origin of Predictable Behaviour, *The American Economic Review* Bd. 73: 560-595.
- Henz, Ursula, und Ineke Maas*, 1995: Chancengleichheit durch die Bildungsexpansion?, *Kölner Zeitschrift für Soziologie und Sozialpsychologie* 4: 605-633.
- Hirsch, Fred*, 1976: *Social Limits to Growth.* Cambridge: Harvard University Press.
- Hogan, Dennis P.*, 1978: The Variable Order of Events in the Life Course, *American Sociological Review* Jg. 43: 573-586.
- Hradil, Stefan*, 1987: *Sozialstrukturanalyse in einer fortgeschrittenen Gesellschaft.* Opladen: Leske und Budrich.
- Hradil, Stefan*, 1988: Die Chancen der neuen Unübersichtlichkeit. *Neue Wege der Soziologie sozialer Ungleichheit*, *Soziologische Revue* 11: 21-28.

The Educational System as a Marriage Market

- Jones, Gill*, 1991: Marriage partners and their class trajectories. in: G. Payne und P. Abbott (Hg.): The social mobility of women. Bristol, PA: Falmer Press.
- Jürgens, Hans W.*, 1973: Zur Demographie der Partnerwahl. S. 31-40 in: *Hans W.*
- Jürgens* (Hg.): Partnerwahl und Ehe - Theorie und Praxis. Hamburg: Wissenschaftlicher Verlag Altmann.
- Kalmijn, Matthijs*, 1991: Shifting Boundaries. Trends in Religious and Educational Homogamy, *American Sociological Review* Vol. 56: 786-800.
- Kerr, Clark*, 1983: The Future of Industrial Societies. Massachusetts: Harvard University Press.
- Klein, Thomas*, 1996: Der Altersunterschied zwischen Ehepartnern. Ein neues Analysemodell, *Zeitschrift für Soziologie* 5: 346-370.
- Krupp, Hans-Jürgen*, 1985: Das Sozio-ökonomische Panel. Bericht über die Forschungstätigkeit 1983-1985. Antrag auf die Forschungsphase 1986-1988. Frankfurt a. M./Berlin.
- Laumann, Edward O.*, 1973: Bonds of Pluralism. The Form and Substance of Urban Social Networks. New York: Wiley.
- Lindenberg, Siegwart*, 1996: Choice-Centred versus Subject-Centred Theories in the Social Sciences: The Influence of Simplification on Explananda, *European Sociological Review* Vol. 12 Nr.2: 147-157.
- Mare, Robert D.*, 1981: Change and Stability in Educational Stratification, *American Sociological Review* 46: 72-87.
- Mare, Robert D.*, 1991: Five decades of educational assortative mating, *American Sociological Review* Vol. 56: 15-32.
- Marini, Margaret Mooney*, 1984: The Order of Events in the Transition to Adulthood, *Sociology of Education* Vol. 57: 63-84.
- Marini, Margaret Mooney*, 1985: Determinants of the Timing of Adult Role Entry, *Social Science Research* Vol. 14: 309-350.
- Mayer, Karl Ulrich*, 1977: Statushierarchie und Heiratsmarkt. Mannheim: Habilitationsschrift.
- Mayer, Karl Ulrich*, 1990: Lebensverläufe und Sozialer Wandel. Anmerkungen zu einem Forschungsprogramm. S. 7-21 in: *Karl Ulrich Mayer* (Hg.): Lebensverläufe und sozialer Wandel, Sonderheft 31 der Kölner Zeitschrift für Soziologie und Sozialpsychologie. Opladen: Westdeutscher Verlag.
- Mayer, Karl Ulrich*, und *Nancy Brandon Tuma*, 1985: Event History Analysis in Life Course Research. Madison, Wisconsin: University of Wisconsin Press.
- Mayer, Karl Ulrich*, und *Hans-Peter Blossfeld*, 1990: Die gesellschaftliche Konstruktion sozialer Ungleichheit im Lebensverlauf. S. 297-318 in: Peter A. Berger und Stefan Hradil (Hg.): Lebenslagen, Lebensläufe, Lebensstile, Sonderband 7 der Zeitschrift *Soziale Welt*. Göttingen: Verlag Otto Schwartz.
- McRae, Susan*, 1986: Cross-class families. A Study of Wives' Occupational Superiority. Oxford: Clarendon Press.
- Müller, Walter*, und *Wolfgang Karle*, 1993: Social Selection in Educational Systems in Europe, *European Sociological Review* Vol. 9 Nr. 1: 1-23.

The Educational System as a Marriage Market

- Müller, Walter, und Dietmar Haun, 1994: Bildungsungleichheit im sozialen Wandel, Kölner Zeitschrift für Soziologie und Sozialpsychologie 1: 1-42.
- Oppenheimer, Valerie K., 1988: A theory of marriage timing, American Journal of Sociology 94. Bd.: 563-591.
- Parsons, Talcott, 1971: The System of Modern Societies. Englewood Cliffs: Prentice Hall.
- Rendtel, Ulrich, 1988: Repräsentativität und Hochrechnung der Datenbasis. S. 289-308 in: Hans-Jürgen Krupp und Jürgen Schupp (Hg.): Lebenslagen im Wandel - Daten 1987. Frankfurt a.M./New York: Campus.
- Rendtel, Ulrich, 1989: Über den Einfluß der Panelselektivität auf Längsschnittanalysen, Vierteljahreshefte für Wirtschaftsforschung 1: 45-61.
- Scheid, Harald, 1996: Zufall. Kausalität und Chaos in Alltag und Wissenschaft. Mannheim/Leipzig/Wien/Zürich: B.I.-Taschenbuchverlag.
- Simmel, Georg, 1970: Grundfragen der Soziologie. Berlin (1917): de Gruyter.
- Shavit, Yossi, und Hans-Peter Blossfeld, 1993: Persistent Inequality. Changing Educational Stratification in Thirteen Countries. Boulder, Colorado: Westview Press.
- Shavit, Yossi, und Hans-Peter Blossfeld, 1996: Equalizing Educational Opportunity: Do Gender and Class Compete? in: Robert Erikson und Jan O. Jonsson: Can Education Be Equalized? Boulder, Colorado: Westview Press.
- Stinchcombe, Arthur L., 1968: Constructing Social Theories. New York/Harcourt: Brace and World.
- Teckenberg, Wolfgang, 1991: Sozialstruktur als differentielle Assoziation. Der Wandel der durch Bildungs- und Berufsstatus geprägten Heiratsbeziehungen in der Bundesrepublik Deutschland zwischen 1978 und 1987. Heidelberg: Habilitationsschrift
- Tegtmeyer, Heinrich, 1979: Soziale Strukturen und individuelle Mobilität. Wiesbaden: Harald-Boldt-Verlag.
- Thurow, Lester C., 1972: Education and Economic Inequality, The Public Interest Jg. 28: 66-81.
- Treiman, Donald J., 1970: Industrialization and Social Stratification. in: Edward O. Lauman (Hg.): Social Stratification: Research and Theory of the 1970s. Indianapolis: Bobs Merrill.
- Ultee, Wout C., und Ruud Luijckx, 1990: Educational Heterogamy and Father-to-son Occupational Mobility in 23 Industrial Nations. General Societal Openness or Compensatory Strategies of Reproduction?, European Sociological Review 6: 1-25.
- Uunk, Wilfred J. G., 1996: Who Marries Whom? The Role of Social Origin, Education and High Culture in Mate Selection of Industrial Societies During the Twentieth Century. Universität Nijmegen: Dissertation.
- Uunk, Wilfred J. G., Harry Ganzeboom und Peter Robert, 1993: Marriage Patterns in Hungary. A Loglinear Analysis by Education and Social Origin for Marriage Cohorts 1930-1980: Unveröffentlichtes Manuskript.
- Weber, Max, 1972: Wirtschaft und Gesellschaft. Studienausgabe Tübingen: J.C.B. Mohr (Paul Siebeck).

The Educational System as a Marriage Market

Wiese, Leopold von, 1967: Der Mitmensch und der Gegenmensch im sozialen Leben der nächsten Zukunft. Köln und Opladen: Westdeutscher Verlag.

Wirth, Heike, 1996: Wer heiratet wen? Die Entwicklung der bildungsspezifischen Heiratsmuster in Westdeutschland, *Zeitschrift für Soziologie* 5: 371-394.

Ziegler, Rolf, 1985: Bildungsexpansion und Partnerwahl. S. 85-106 in: *Stephan Hradil* (Hg.): Sozialstruktur im Umbruch. Opladen: Leske + Budrich.

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Appendix: Distribution of Upward, Downward and Homogamous Marriages With Regard to Educational Attainment Level for Birth Cohorts and Different Educational Classifications

Cohorts Classification	Upward Marriage				Homogamous Marriage				Downward Marriage			
	1 %	2 %	3 %	4 %	1 %	2 %	3 %	4 %	1 %	2 %	3 %	4 %
<u>Wives</u>												
(1900 - 1918)	48,4	48,4	54,6	56,7	50,3	49,7	42,7	38,9	1,3	1,9	2,6	4,5
1919 - 1923	52,1	52,2	55,4	55,4	43,9	43,9	40,8	38,2	4,0	3,8	3,8	6,4
1924 - 1928	46,7	46,8	50,7	54,7	49,3	48,7	44,3	38,9	4,0	4,4	4,9	6,4
1929 - 1933	54,4	54,8	57,5	61,8	40,8	40,4	37,3	31,6	4,8	4,8	5,3	6,6
1934 - 1938	37,8	38,2	42,1	45,2	56,0	55,2	50,6	42,5	6,2	6,6	7,3	12,4
1939 - 1943	36,9	36,9	41,3	42,5	58,1	57,8	53,4	48,1	5,0	5,3	5,3	9,4
1944 - 1948	26,7	27,1	31,4	36,5	65,5	64,7	60,4	48,2	7,8	8,2	8,2	15,3
1949 - 1953	27,0	27,0	35,8	38,6	68,8	68,8	55,8	47,0	4,2	4,2	8,4	14,4
1954 - 1958	23,9	23,9	30,1	32,5	70,6	69,9	60,6	47,1	5,5	6,2	9,3	20,4
1959 - 1963	21,6	22,2	30,6	29,9	70,0	68,3	54,6	50,4	8,4	9,5	14,8	19,7
(1964 - 1978)	22,3	22,8	29,8	28,7	69,9	68,5	56,4	42,9	7,8	8,7	13,8	28,4
<u>Husbands</u>												
(1900 - 1918)	1,9	2,2	2,6	4,8	51,7	51,3	45,7	41,3	46,5	46,5	51,7	53,9
1919 - 1923	5,8	6,5	6,5	7,8	44,8	44,2	38,9	34,4	49,4	49,4	54,6	57,8
1924 - 1928	4,6	4,6	5,0	6,9	42,5	42,0	39,7	34,7	52,9	53,4	55,3	58,5
1929 - 1933	5,9	6,3	6,3	8,9	45,6	44,7	41,8	35,4	48,5	48,9	51,9	55,7
1934 - 1938	5,8	6,2	6,8	12,7	57,5	57,1	52,9	45,5	36,7	36,7	40,3	41,9
1939 - 1943	5,1	5,1	5,4	12,1	61,6	61,3	57,1	46,7	33,3	33,7	37,5	41,3
1944 - 1948	5,4	5,8	8,3	14,9	66,8	66,4	57,3	45,2	27,8	27,8	34,4	39,8
1949 - 1953	6,3	7,1	9,4	16,2	70,7	69,9	60,5	50,8	23,0	22,9	30,1	33,1
1954 - 1958	3,8	4,4	9,5	17,4	73,7	73,0	59,0	52,2	22,5	22,5	31,4	30,4
1959 - 1963	7,7	8,5	15,4	24,6	71,5	70,4	56,5	46,9	20,8	21,2	28,1	28,5
(1964 - 1978)	13,4	13,4	17,1	31,7	65,2	64,0	50,6	40,2	21,3	22,6	32,3	28,1

- 1 = Educational classification used in the current analysis (see Table 1).
 2 = Additional differentiation between *lower secondary school qualification (Hauptschule) without vocational training and intermediate school qualification (Mittlere Reife) without vocational training*.
 3 = Additional differentiation between *higher secondary school qualification (Abitur) without and with vocational training and lower secondary school qualification (Hauptschule) and intermediate school qualification (Mittlere Reife) with vocational training*.
 4 = Additional differentiation between *intermediate school qualification (Mittlere Reife) with vocational training and higher secondary school qualification (Abitur) without and with vocational training and lower secondary school qualification (Hauptschule) with vocational training*

Source: Socio-Economic Panel, Waves 1984-94