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Psychological Health: an Analysis of the Intersection of Cumulative Disadvantage and Partnership Events[1]

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1 Introduction[2]

The relationship between social inequalities and health is complex and multidimensional. In the past few decades much research has been dedicated to identifying social pathways to psychological well-being. These provide rather consistent evidence for the causal relationship between low income and poor health; the results of the comparatively small number of studies with longitudinal data show that current income is less important for health than long-term income, income change less than income level and that persistent poverty is more harmful for health than occasional episodes. Such long-term conditions coupled with trajectories contingent on social, historical and personal biographical events over time reflect the life-course perspective on health. This perspective understands health as the outcome of past social positions *and* as a result of structured processes in which advantages or disadvantages are selectively accumulated. Recent research has examined the relationship between cumulative advantages/disadvantages and health (Willson and Shuey, 2007), in particular the structural location in society (social position) on different life trajectories. Apart from cumulative disadvantage and social position, the impact of life events on health differs in degrees and time spans.

Empirical analysis suggests that the individual life course is still structured around the family cycle (Levy, 2001, 10): a majority of the population marries in Switzerland (Wanner, 2002, 9) and marriage still enjoys a high status (Smock, 2004). Therefore, partnership events provide a good case for life events; they represent both a life course transition that are experienced by a large part of the population and are studied as critical life events that impact on health. For example, there is empirical evidence that marital dissolution has negative consequences for adult well-being (Amato and Keith, 1991).

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2 We thank Ursina Kuhn for her most helpful contribution to translating certain parts of this article to English.

At the core of this article are the consequences of partnership events and cumulative disadvantage for psychological health[3]: do cumulative disadvantage and partnership events intersect, i.e. does social positioning increment the effect of partnership events on psychological health?

The rest of this article is structured as follows: section 1 is dedicated to a brief overview of the field of inequalities and the life course, cumulative disadvantage and its impact on health, and inequalities in health. The data and method are described in section 2. Section 3 is dedicated to elaborating the operational definitions. In section 4 we present the results. We conclude with a discussion in section 5.

1.1 Inequalities and the life course

Inequalities research in a broad sense and stratification research in a narrow sense describe and analyze the system of inequality and its persistence despite modern egalitarian values (Grusky, 2001) as well as its impact on the life of individuals and collective actors. A common (not so clear cut) distinction within research in social stratification is between inequality of opportunity and inequality of condition (Breen and Jonsson, 2005). The former area is mainly constituted by social mobility research, where intra and inter-generational mobility are distinguished. Life course research belongs to the field of intra-generational mobility (for a general review see e.g. Mortimer and Shanahan, 2003; Mayer and Schoepflin, 1989; Sapin et al., 2007) and thus is associated to inequality research.

The sociological interest for the life course perspective can be traced to the early 20th century (for an historical overview, see Levy, 2001, 1996; Mayer, 2004). However, even today, the theoretical frameworks are variable and not very consolidated (Levy et al., 2006, 462). Nevertheless, these perspectives share common principles. The life course reflects the intersection of social and historical factors with personal biography; life course perspectives focus on transitions and trajectories and require a dynamic, longitudinal perspective (for the main sociological life course mechanisms, see Mayer, 2004).

One of the main (sociological) debates in the field asks whether the life course is standardized, individualized or differentiated (MacMillan, 2005). Research in Switzerland shows that it is rather bounded and embedded in social structures, and differentiated according to male and female trajectories, despite a certain degree of variability characterizing these. Therefore, various authors reject the extreme individualization of key aspects of life for Switzerland (Levy et al., 2006; Widmer et al., 2003; Widmer et al., 2005). Individual-based studies of life course transitions examine the effects of transitions at one point in time on subsequent life course outcomes. Of particular interest are the conditions under which events or transitions experienced earlier in life affect subsequent life course patterns. Life course

3 We use the term psychological health and psychological well-being interchangeably.

research and social inequalities serve as the theoretical frame to identify elements that help explain health status and health change for our analyses.

1.2 Cumulative dis/advantage

The theory of cumulative advantage/disadvantage is generally attributed to Merton's analysis of the Matthew effect in science, and more generally defined as follows: it is "... the principle of cumulative advantage that operates in many systems of social stratification to produce the same result: the rich get richer at a rate that makes the poor become relatively poorer" (Merton, 1968, 62). In addition to explaining scientific careers (e.g. Cole and Cole, 1973), the theory of cumulative advantage/disadvantage was originally developed to explain intra-cohort divergence with age for outcomes such as income (e.g. Crystal and Shea, 1990) or school and labour market achievements (see DiPrete and Eirich, 2006 for a recent general review).

Research on status attainment and life course research provides the background for the development of cumulative advantage/disadvantage approach. Mainstream research, however, refers to the concept of cumulative advantage/disadvantage to describe a process of over-time accumulation of advantage/disadvantage leading to growing inequality and diverging trajectories with age. Recent research understands it to reflect path-dependent trajectories where inequalities arise from previous statuses. Whereas life course studies point to a wide array of forces that differentiate a population over time, the recent understanding of cumulative advantage/disadvantage theory emphasizes early inequalities leading to different trajectories. A large body of literature provides evidence for cumulative advantage/disadvantage, e.g. on educational attainment (Kerckhoff and Glennie, 1999), wealth accumulation (Scholz and Levine, 2004), criminal careers (Sampson and Laub, 2003), and ageing (Dannefer, 1987, 2003; Zimmermann et al., 2006). Results in the field of health research are inconsistent with respect to how accumulated socioeconomic advantage/disadvantage shapes health inequality over the life course. This uncertainty may be partly due to the reliance on cross-sectional data to address age changes in health (Ferraro and Kelley-More, 2003:709). Although conceptual discussions on cumulative advantage/disadvantage as producing health inequality across the life-course are increasing, empirical studies addressing the cumulative processes linking inequality to health are still scant (for a review see Willson and Shuey, 2007).

1.3 Inequalities in health

Pathways explaining social inequalities in health are many and complex (Budowski and Scherpenzeel, 2005). Studies on the relationship between material (deprivation, poverty, wealth, or lack of access to medical and educational services) and social dimensions (e.g. socioeconomic status, race, gender) produce the rather consistent finding that poorer living conditions and socially disadvantaged positions result in poorer health (Gordon et al., 2000).

A growing body of research documents delayed and time-lagged effects of social environments on health, such as cumulative and long-term effects of poverty or elevated permanent income or cumulative effects of psychosocial experiences on health (Singer and Ryff, 1999). Psychosocial experiences result from cumulative disadvantages, from life course transitions or from critical life events, such as the accident or death of a closely related person, or stress from illness, problems with own children, unemployment, having experienced violence, etc. (Kessler 2000). Singer and Ryff (1999, 96) hypothesize that health outcomes depend upon both cumulative advantages and disadvantages across multiple life domains. Berkman and Kawachi (2000) stress the idea that a developmental and life-course perspective could yield important new insights. Recent research has further identified *political factors and/or income inequality* to impact on health (Wilkinson, 1996).

Gender (Macran et al., 1996; Bartley et al., 1999) and the structure of role-specific interactions among people as they are experienced in family relations, in living arrangements, neighbourhoods, at work, or in society at large represent *social and cultural circumstances that have an impact on health* (Evans et al., 1994). Holding a married civil status, for example, has been shown to be beneficial for well-being when compared to never-married, widowed, or separated or divorced. However, the importance of civil status as a life course marker has diminished as cohabitation or joint/step families have become more common in society (Kohli, 1985; Levy et al., 1997); household composition may thus be an equivalent or a better indicator than civil status for comparative purposes.

Environments structure social beings and individuals *interpret, assess and change their situations*, too. They do so within habitual routines where social relationships are important in maintaining feelings of belonging, support and identity. *Critical life events* disrupt habitual routine and require re-orientations (Filipp, 1981; Klauer and Filipp, 1995) that affect psychological health.

Social relationships represent the flow, the quantity and diversity of potential support sources; numerous studies conclude that social support is beneficial to health (House et al., 1988; Antonucci and Akiyama, 1995), particularly when small children are present. Few studies provide contrary evidence (e.g. Rook, 1992). Various studies document the buffering effect of social support for negative consequences of health from life events (e.g. Thoits 1995, Pearlin et al., 1981).

In this article we bring together the impact of cumulative advantage/disadvantage and partnership events to understand whether and how they intersect on change in psychological health and on health status. Our empirical analyses follow three questions: (1) how does psychological well-being change around a given life event? (2) Does cumulative disadvantage have an impact on a *change in psychological well-being* due to a partnership event? (3) Does cumulative disadvantage contribute to explaining health status shortly after the occurrence of the partnership event?

We analyze the relationship between partnership event, gender and psychological well-being or change in psychological well-being.

2 Data, model and method

2.1 Data: the Swiss Household Panel

The data of the Swiss Household Panel (SHP) are particularly useful to observe social change, in particular the dynamics of changing living conditions in the population resident in Switzerland; they also serve well for analyzing life events, as the large sample size and the multiple waves allow pooling data around such events. We pool the data of the first eight waves (1999 to 2006) according to civil status and partnership event at the date of the interviews.

The first sample of the SHP (SHP_I) is a stratified random sample of private households representing the non-institutional resident population in Switzerland in 1999[4]. The households selected in this way represent the various social groups in all regions of Switzerland. A refreshment random sample of "new" households was injected in 2004 (SHP_II) following the same methodology[5].

In these analyses we include individuals, 18 years and older, who have experienced one of the partnership events (such as starting cohabitation, marriage, dissolution of marriage through separation or divorce, or becoming widowed during the first eight years available in the survey). Change in partnership refers to change in civil status at interview dates across these waves or when single, of entry into cohabitation or marriage. Ideally all household members aged 14 and older are interviewed in the SHP survey, however, often a member refuses to participate. Partnership events also concern children moving out of the household or partners moving in. Only a small percentage of households have both partners experiencing the same event and only one variable is in common for these individuals in the analyses (variable: living with children in the household); the rest of the variables tap the individuals' experiences and assessments that we do not expect to co-vary with a partner in its effects on health. Individuals having participated at least during two, respectively three consecutive waves are included. The analyses built on two consecutive waves have a sample size of n=1767; those with three consecutive waves of n=1099. As the data are arranged around the partnership events and the sample size is small weighting according to year does not appear justified.

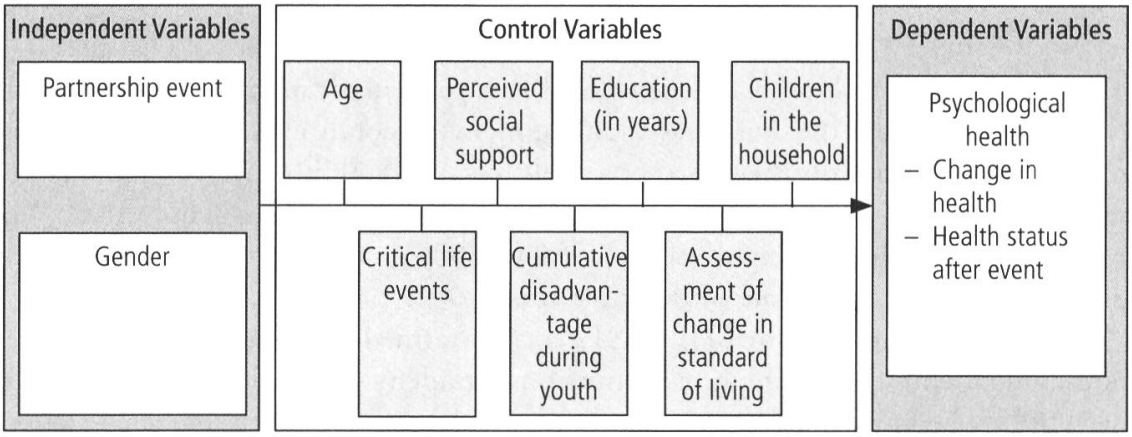
4 It is a random sample of each of the seven major statistical regions of Switzerland by means of the Swiss telephone directory (SRH – Stichprobenregister für Haushalterhebungen) covering over 95% of all private households.

5 For more information on the samples see http://www.swisspanel.ch/.

2.2 Model and method

The following model presents the expected relationships between the entry into or dissolution of a partnership and the psychological well-being (Diagram 1).

Diagram 1: Research model



As can be seen in Diagram 1, we are interested in *two dependent variables* resulting from partnership-related events: (1) how health status changes (variable: *change in health)*: change between first interview date before the event and the first interview after the event) and (2) which factors may explain health status at the first interview date after an event (variable: *health status after event*).

Effects of life events are observed in particular between a month and a year after the events occur (Kessler, 1997); effects of change in civil status appear even before it takes place (Kessing et al., 2003). For these reasons, we refer to a *time sequence* of the two, respectively three interview dates around the selected partnership events: Time t_{-1} refers to the last interview before the event, i.e. at most one year before the event. Time t_0 is the first interview after the event occurred. This interview is at most one year after the event took place. Time t_{+1} refers to the interview one year after t_0.

Further we control for age, level of education, whether children live in the household or not, as well as cumulative disadvantages during youth, number of life events prior to the entry or dissolution of a partnership, social support (and change thereof) and assessed change in living standard. We expect that dissolution of marriage will have the strongest effects; for the other life transitions, too scant literature is available to formulate expectations, but we expect entry into cohabitation or marriage to be rather beneficial for health – due to its voluntary character. On the other hand in line with the reviewed literature, we predict cumulative disadvantage to have an impact on health even when controlling for the variables mentioned above; we further expect the impact of social support as a proxy for

social and cultural environment, as partnership events represent a certain type of social relationships.

We begin our analysis by describing possible changes in psychological health due to a partnership event. Secondly, applying a general linear model, we examine which factors contribute to explaining psychological health.

3 Definition and measurement

Research on health has distinguished different components and different levels of analysis. In this paper, we are interested in health indicators on the micro level. Generally medical sociology distinguishes between physical and mental/psychological health, recurring to the definition of health given by the World Health Organization in 1948.

For the purpose of our analysis we constrain ourselves to psychological health. *Psychological health* is constructed as a factor using four variables that represent slight depressive symptoms: depressive feelings, feeling weak, having problems to sleep and having energy or being optimistic.[6] The extracted factor represents an interval scale and is standardized (mean=0; standard deviation=1). Negative values correspond to psychological health problems, positive values to psychological health.

With *partnership events* we refer to entry into and dissolution of partnerships during the period of observation. They are grouped into three "sets":

1 from never-married to "cohabitation" or "marriage": (i) persons (without a partner) beginning cohabitation or getting married; (ii) persons with a partner getting married;
2 from "married" to (i) "separated, divorced" or (ii) "becoming widowed";
3 from (i) "separated, divorced" or (ii) "widowed" to "cohabitation or marriage".

Cumulative disadvantage of youth is an indicator during whether respondents experienced poverty during their youth (age 15), whether the highest education achieved in the youth's household was only mandatory (or lower) and whether the respondent grew up in a single parent household. The indicator reflecting zero to three disadvantages during youth is expected to have an impact on health in a time-lagged way.

Critical life events (prior to the partnership event) may cumulate and affect health in a time-lagged way. Five different critical life events available in the data set (accident of a closely related person; death of a closely related person; illness; problems with own children; and experience of insult or threat, being hit or

6 See www.swisspanel.ch for questionnaires and question wording.

wounded) are summarized for the year prior to the partnership event. The values range from zero to five.

Perceived social support is measured by two indicators: the first considers the potential emotional and instrumental support from different social domains (partner, kin, neighbours and friends) at time t_{-1} (before the event) and sums this up to an indicator. *Change in social support* is calculated by the difference in social support from time t_{-1} and time t_0. *Educational level* is calculated in years. The level is defined as the highest one achieved by the person at the interview date just after event occurrence (t_0). The variable *children in the household* indicates whether a child (aged 0 to 18 years) is present in the household at t_{-1}. *Age* indicates years of age of a person at t_{-1}. The variable *change in standard of living* indicates whether the interviewed person thinks that his or her living standard at t_0 has improved or worsened within the last year (worsened=0; improved=10).

4 Results

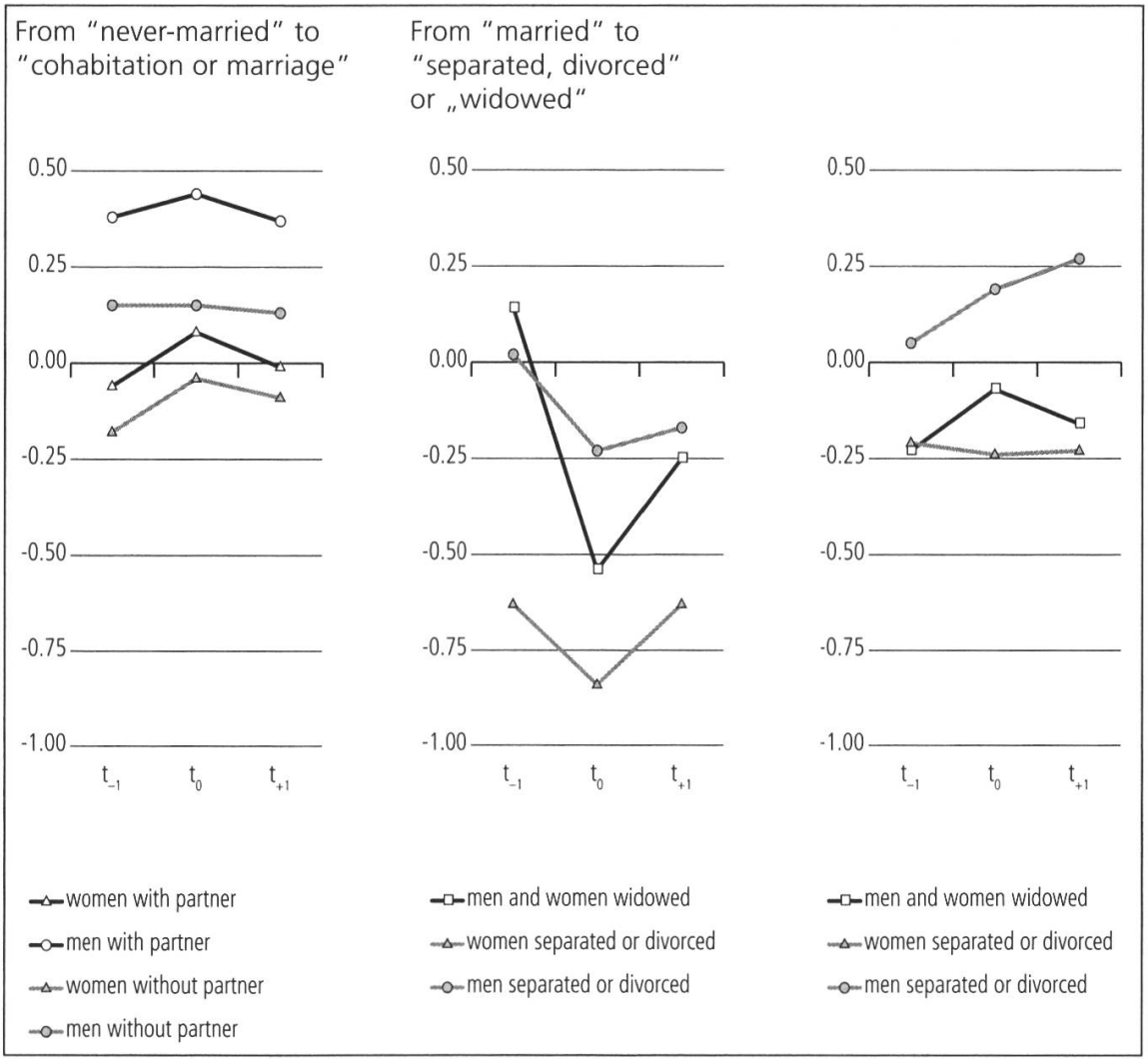
4.1 Change in psychological health around the life event of entry into or dissolution of a partnership

In this section we describe whether we observe change in psychological health around a partnership event or not. Diagram 2 depicts this change for the three sets of partnership events defined above at three measurement points: before event occurrence (t_{-1}), the first interview after the event occurred (t_0), and a subsequent interview one year thereafter (t_{+1}). Changes are shown separately for men and women with the exception of respondents having experienced the death of their spouse due to sample size.

First, we observe a general lower health status for women than for men. This confirms research that focuses on slight depressive items, where women on average score higher than men. However, we do not focus on gender differences but on determining factors of change in psychological well-being over a three-year time span as a result of partnership events. In the first set of trajectories (never married with or without partner to cohabitation or marriage) in Diagram 2 we observe that never-married women's health (with or without a partner at t_{-1}) tends to react more sensitively to cohabitation or marriage. The event presents a positive effect only for those men who had a partner before they married; cohabitation or marriage for never-married men without a partner at t_{-1} shows no change over the three years.

The second set of trajectories shows the change in health around the dissolution of a partnership (separation/divorce or loss of spouse through death). Married men and women's health declines when a close relationship is dissolved. Whilst women's mean health value scores –0.63 before the event occurs (t_{-1}), it declines to -0.84 points at the first interview after the event (t_0) to recover to the original value

Diagram 2: Change in psychological health according to partnership event



Remarks: n=1099; source: SHP data 1999-2006; the sample sizes are:
(1) from "never-married" to "cohabitation or marriage": men without partner: t_{-1}: 192; t_0: 248; t_{+1}: 249; women without partner: t_{-1}: 180; t_0: 260; t_{+1}: 260; men with partner t_{-1}: 100; t_0: 125; t_{+1}: 125; women with partner: t_{-1}: 97; t_0: 122; t_{+1}: 122;
(2) from "marriage" to (i) "separated, divorced": men: t_{-1}: 18; t_0: 22; t_{+1}: 22; women: t_{-1}: 33; t_0: 40; t_{+1}: 40; (ii) "widowed": men and women: t_{-1}: 42; t_0: 53; t_{+1}: 52;
(3) from "separated, divorce" to (i) "cohabitation or marriage": men: t_{-1}: 45; t_0: 72; t_{+1}: 73; women: t_{-1}: 86; t_0: 114; t_{+1}: 113; (ii) "widowed": men and women: t_{-1}: 25; t_0: 41; t_{+1}: 38. The complete table with the confidence intervals may be obtained from the authors.

of –0.63 at the subsequent interview (t_{+1}). Although men's mean health value also declines from 0.02 (at t_{-1}) to -0.23 (at t_0) it regains its initial value only partially thereafter (–0.17 at t_{+1}). The decline in psychological well-being is the greatest for the sub-sample of those having experienced the death of their partner (from 0.14 at t_{-1} to –0.54 at t_0), and the recovery is only partial (–0.25 at t_{+1}). The small sample size restricts further disaggregation.

The third set of trajectories shows that entry of separated/divorced or widowed persons into cohabitation or marriage is associated with a slight improvement in psychological health. We observe different health trajectories for men and women: men's mean health values increases steadily from 0.05 prior to event occurrence (t_{-1}) to 0.19 at the first interview after the event (t_0) and again to 0.27 a year later (t_{+1}). Separated/divorced women's health remains the same across the three interview dates. Cohabitation or marriage after having lost a spouse through death only slightly improves the value momentarily (from -0.21 at t_{-1} to -0.07 at t_0 to decline again to -0.16 at t_{+1}).

Summing up, we find that health varies according to event. Women's and men's psychological health declines when a partnership is dissolved through separation or divorce and especially through death. Well-being seems to improve for separated/divorced men and women who start cohabiting or marry again; although men appear to gain, separated and divorced women's well-being decreases to the prior value after the event. This result confirms other studies (Waite and Gallagher, 2000; Waite, 1995). In the following section, we analyze the factors contributing to changes in health resulting from partnership events and gender-specific characteristics by means of a multivariate model.

4.2 Impact of change in partnership on psychological health (general linear model)

We analyze the change in health between time t_{-1} (prior to event) to time t_0 (first interview after event) with a general linear model[7]. A description of the sample precedes the analyses. The six sub-samples are samples pooled around a partnership event comprising a total of 1 767 individuals. Women make up for 53.2%. Table 1 shows the distribution of men and women according to event. It is distributed approximately equally in all sub-samples with the exception of fewer men among the recently widowed (17.3%), separated/divorced (34.7% and 40.2% respectively).

Table 1: Distribution by event from t_{-1} to t_0 and sex (absolute and relative n by sex)

	Women		Men		Total
Never-married without partner to partnership/marriage	413	48.9%	436	51.1%	849
Never-married with partner to marriage	180	49.3%	185	50.7%	365
Married to Separation/divorce	77	65.3%	41	34.7%	118
Separated/divorced to cohabitation/marriage	174	59.8%	117	40.2%	291
Married to becoming widowed	67	82.7%	14	17.3%	81
Widowed to new partnership/marriage	29	(46.0%	34	54.0%	63
Total	940	53.2%	827	47.8%	1'767

Remarks: n=1767; source: SHP data 1999–2006 (unweighted).

7 For more information on the general linear model see for example Rutherford (2001).

To investigate the determinants of *psychological health* we apply two concepts of health: (1) *change in health* around a partnership related event, i.e. we assume that variability in health status is a function of the changing circumstances of a partnership event; (2) *Health status* at the first interview after the event. Apart from the independent variables *partnership event* and *gender*, we include a series of variables that have been found to be important theoretically or empirically (referred to in previous sections): *cumulative disadvantage during youth*; *critical life events*; *perceived social support*; *change in perceived social support*; and *assessed change in living standard*. The effects of the partnership event on health are further controlled for by the variables *age*, *education* (in years), and the presence of *children in the household*.

4.2.1 Description of the sample for the inferential statistical analysis

This description[8] illustrates the particularities of the individuals experiencing the partnership events (widowhood is generally later in life, separation earlier, etc.).

The youngest sub-sample is the never-married, who enter a partnership with a mean age of 28.6 years, followed by the never-married who live with their partner and then marry (77.2% are younger than 40 years of age). Separation or divorce is experienced at approximately 42.8 years of age. Previously separated or divorced, who begin cohabiting or marry are accordingly older with 47.8 years of age.

Being separated and beginning cohabitation occurs mainly between the age of 40 and 65 years (with proportions of 61% and 72.5% respectively). Becoming widowed occurs later in life at the mean age of 66.4 years; when widows and widowers begin cohabiting or re-marry, they are slightly older (67.2 years old). These results depict that partnership events are distributed across the life span.

The most frequently achieved highest educational category in the sub-samples with the exception of the widowed is the intermediate one (vocational training, apprenticeship) ranging from a proportion of 29.1% among the never-married without a partner to 55.6% among the widowed who begin cohabiting or re-marry. Among the widows and the widowers we find the largest proportion with a low educational level[9] (39.5%) suggesting a cohort effect. Among the never-married with a partner who subsequently marry and the sub-samples of the married who separate or divorce, or the separated or divorced beginning cohabitation or re-marrying, we observe the largest percentage with the highest educational level (30.7%, 22.0% and 19.9%).

In line with the different phases of family cycle, partly reflected by the partnership events, we find a large portion of the sample without children younger than 18 years of age in the household. People separating or divorcing have the highest percentage of children in the household (67.8%). Young people forming partner-

8 Tables are not presented due to space restrictions. They may be requested from the authors. These contain the distribution of age, education, presence of children in the household and number of disadvantages in youth according to partnership event.

9 Low educational level comprises compulsory school, elementary vocational training, one year schooling in addition to the compulsory level or general training school.

ships often do not have children yet, and people becoming widowed are generally older and their children have left home or are aged 18 and older.

The number and type of disadvantages in youth also vary according to partnership event. Whereas 40.4% of the widowed present one disadvantage during youth, the percentage of the separated and divorced is slightly lower with 31.6%. This percentage declines to 25.4% amongst the never-married. Cumulative disadvantage appears to mirror age and cohort effects.

The frequency of three different types of deprivations (financial problems, low educational level of parents, and living in a one parent household) at age 15 is similar (between 12.3% and 14.9%) for the sub-samples of the never-married. Financial problems during youth (22.8%) and low educational level of parents (15.8%) are more frequent among the sub-samples of the separated or divorced. The highest portion of disadvantages is found amongst the widows and widowers: financial problems (42.6%) and low educational level of parents (42.6%). Single parent families (when the respondent was 15 years old) are most common among the oldest group (widows and widowers with 18.4%) and not among the youngest (the never-married with 14.9%).

4.2.2 Changes in psychological health according to partnership event

This section focuses on the change in health according to partnership event, i.e. the change in health level from the interview prior to the event (t_{-1}) to the first interview after the event (t_0). The first question is: what impact do the independent variables (partnership events and gender) have on change in psychological health? Apart from the independent variables (partnership event and sex of respondent), the general linear model takes into account the covariates age, educational level, children in the household, social support before event occurrence, change in social support (t_{-1} to t_0), change in standard of living (t_{-1} to t_0), life events and cumulative disadvantage. The reference group for the variable *partnership event* is the never-married without partner who enter a partnership or marry, who – as the descriptive results showed – experience the least change in health across the three points in time; men represent the reference group for the variable *gender*.

The calculation of between-subjects effects shown in Table 2 indicates that partnership events have a significant but rather weak (Eta = 0.016) impact on health change when controlling for the covariates. Interaction effects between sex and change in partnership are not significant.

The rather poor fit of the model in Table 2 with an R^2 of 0.049 indicates that the variables in the model cannot explain the variation in change in psychological health. Among the control variables considered, change in social support seems to be most important. Table 3 shows that a separation or divorce (b = –0.443) as well as a loss of partner through death (b = –0.513) – the result just misses the significance level – deteriorates psychological health of the respondents. The in-

Table 2: Impact of independent and control variables on change in psychological health (Test: between-subjects effect, model 1)

Between-subjects effects	Sum of squares Type III	df	F	Signifi-cance	Partial eta squared
Corrected model	54.650	19	3.534	.000	.049
Constant	.310	1	.381	.537	.000
Age	1.662	1	2.042	.153	.002
Educational level (in years)	1.645	1	2.021	.155	.002
Children in the household	1.084	1	1.332	.249	.001
Social support before partnership event	.832	1	1.022	.312	.001
Change in social support	9.653	1	11.861	.001	.009
Change in living standard	.705	1	.866	.352	.001
Critical life events (prior to partnership event)	.116	1	.143	.705	.000
Cumulative disadvantage during youth	1.678	1	2.062	.151	.002
Partnership event	17.534	5	4.309	.001	.016
Sex	.003	1	.003	.955	.000
Partnership event * sex	5.343	5	1.313	.256	.005

Remarks: the dependent variable is calculated as change in psychological health ($t_0 - t_{-1}$).
$R^2 = .049$ (corrected $R^2 = .035$); n=1331; source: SHP data 1999–2006 (unweighted).

Table 3: Power and effect (parameter estimation) of the impact of selected variables on psychological health (test: parameter estimation, model 1*)

Parameter	B	Standard error	T	Signifi-cance	Partial eta squared
Constant	–.057	.259	–.219	.827	.000
Change in social support	.070	.020	3.444	.001	.009
Partnership event 1a: becoming widowed	–.513	.284	–1.809	.071	.002
Partnership event 2a: separation / divorce	–.443	.184	–2.401	,017	.004
Partnership event 2c: separation / divorce * sex: woman	.376	.203	1.853	.064	.003

Remarks: *Only selected parameters are presented ($p < 0.1$); the complete table may be obtained from the authors; dependent variable calculated as change in psychological health ($t_0 - t_{-1}$). [a] Group of reference: never-married without partner to partnership/marriage; [c] Group of reference: never-married without partner to partnership/marriage and man; n=1331; source: SHP data 1999–2006 (unweighted).

teraction effects with sex just miss the significance level but suggest that men are more strongly affected by divorce than women (b = 0.376). These results reflect only partially the patterns found in the descriptive analyses. We conclude that the variables in the model are not well suited to explain change in psychological health due to a partnership event.

4.2.3 Psychological health status after partnership event (general linear model)

Table 4 reports the between-subjects effects of health level at the first interview after the occurrence of the partnership event (t_0). It presents evidence for the effects of the partnership event: however, with a partial eta squared of 0.009, we again observe only a weak effect. Sex (eta squared = 0.021), the change in social support and living standard (eta squared = 0.016 respectively 0.017) and cumulative disadvantage during youth (eta squared = 0.012) have a greater impact on psychological health. Although the description of the sample indicated cohort effects (in section 4.2.1), these results suggest that cumulative disadvantage affects psychological health over and beyond cohort effects because the impact of age is not significant. A small but statistically significant association between psychological health and degree of social support before the partnership event exists (eta squared = 0.001); no significant interaction is observable between sex and partnership event.

Table 4: Impact of independent and control variables on the psychological health after life event (test: between-subjects effect, model 2)

Between-subjects effects	Sum of squares Type III	df	F	Significance	Partial eta squared
Corrected model	195.565	19	10.726	.000	.135
Constant	16.101	1	16.779	.000	.013
Age	.326	1	.340	.560	.000
Educational level (in years)	.635	1	.661	.416	.001
Children in the household	.211	1	.219	.640	.000
Social support before partnership event	21.881	1	22.803	.000	.001
Change in social support	20.484	1	21.346	.000	.016
Change in living standard	22.193	1	23.128	.000	.017
Critical life events (prior to partnership event)	2.973	1	3.098	.079	.002
Cumulative disadvantage during youth	14.881	1	15.508	.000	.012
Partnership event	11.978	5	2.497	.029	.009
Sex	26.699	1	27.823	.000	.021
Partnership event * sex	7.043	5	1.468	.197	.006

Remarks: the dependent variable is psychological health at the first interview date after the occurrence of the event (t_0). $R^2 = .135$ (corrected $R^2 = .122$); n=1331; source: SHP data 1999–2006 (unweighted)

Table 5: Power and effect (parameter estimation) of the impact of selected variables on psychological health (test: parameter estimation, model 2*)

Parameter	B	Standard error	T	Signifi-cance	Partial eta squared
Constant	-1.069	.281	-3.806	.000	.011
Social support before event	.117	.025	4.775	.000	.017
Change in social support	.103	.022	4.620	.000	.016
Change in assessment of living standard	.107	.022	4.809	.000	.017
Life events prior to partnership event	-.039	.022	-1.760	.079	.002
Cumulative disadvantage during youth	-.159	.040	-3.938	.000	.012
Partnership event 3a: widowed to entry into new partnership	.446	.212	2.107	.035	.003
Sex: woman[b]	-.309	.086	-3.572	.000	.010
Partnership event 4c: separated/divorced to partnership/marriage * sex: woman	-.297	.154	-1.934	.053	.003

Remarks: *Only selected parameters are presented ($p < 0.1$); the complete table may be obtained from the authors; the dependent variable is psychological health at time t_0. [a] Group of reference: never-married without partner to partnership/marriage; [b] Group of reference: men; [c] Group of reference: never-married without partner to partnership/marriage and man; n=1331; source: SHP data 1999–2006 (unweighted).

Overall the second model provides a better explanation of the variance ($R^2 = 0.135$). In line with the descriptive analyses, Table 5 shows significantly lower values for psychological health for women than for men ($b = -0.309$).

Taking into account the control variables, the life event cohabitation or marriage after widowhood appears particularly beneficial for psychological health ($b = 0.446$). The analysis reveals further factors affecting health status: the greater the perceived potential social support before the partnership event ($b = 0.117$) and the greater the increase thereof at the first interview (t_0) after occurrence of event ($b = 0.103$), the better the values for psychological health. The assessment of change in living standard affects health positively ($b = 0.107$). We also observe an association between an increase in number of disadvantages in youth and decrease in psychological health ($b = -0.159$). Consequently, the second model suggests that cumulative disadvantage during youth, social support and assessed living standard play a crucial role in explaining psychological health at the time after occurrence of a partnership event (and possibly other points in time) and offset other variables, for example cumulating life events prior to event occurrence.

4.2.4 Important results of the two models

Summarizing the results of the models, we find that demographic and socioeconomic characteristics do not substantially contribute to explaining psychological health. If the control variables are taken into account, the partnership events lose their rel-

evance. Only the partnership event separation/divorce and widowed to cohabitation or marriage remain relevant as explanatory variables for psychological health.

Psychological health status at the first interview after the event (t_0) is influenced by various variables. An increase in perceived level of social support after the event (t_0) and a high level of perceived social support before it occurs (t_{-1}) as well as an improved standard of living is beneficial for psychological health. Cumulativedisadvantage during youth have a negative impact on psychological health.

The difference between the two models is interesting: *change in health* cannot be explained by the variables in the model; yet, various variables with information from the past (cumulative disadvantage during youth) and from today (increasing social support and an improved living standard), have an effect on psychological health at a given point in time.

5 Discussion and conclusion

We set out to analyse the intersection between cumulative disadvantage and a partnership event on psychological well-being. This is one way to better understand the complex and multidimensional relationship between social inequalities and health.

The research on the relationship between cumulative advantages/disadvantages and health (Willson and Shuey, 2007) accounts for the structural location in society and its influence on different life trajectories. Apart from cumulative disadvantage (and social position), life events are known affect health to different degrees temporarily (Wallerstein and Kelly, 1980).

Our analysis builds on partnership events occurring in the eight waves the Swiss Household Panel provides data for (1999–2006). We describe how psychological well-being changes around partnership events (entry and dissolution) and identify which factors explain *health change* and *health status* by means of a general linear model. Finally we analyse the role of cumulative disadvantage on psychological health.

Life course and social inequalities research provides the conceptual framework for the analyses. We identify the relevant variables for the models (partnership events, other critical life events, cumulative disadvantage, social support, living standard) and include other variables known to influence health (age, education, having children in the household, gender).

The descriptive analysis shows change in psychological well-being according to partnership event and whether a woman or man is experiencing it. In particular, separation or divorce and becoming widowed entail a decline in health (at the first interview after the event). However, women experiencing divorce or separation recover the level of their psychological well-being prior to the event at the second

interview after event occurrence; men experiencing divorce or separation and people who have lost their spouse through death regain only partially the original level. When divorced/separated or widowed persons enter cohabitation or marriage, this appears particularly beneficial for men's health, as their well-being improves; divorced or separated women's health barely profits from it. These results confirm other studies where men benefit more from marriage or entry into partnership than women, even if the trajectories appear rather similar[10].

Although trajectories are visible in a descriptive way, change in psychological health cannot be explained in a satisfactory way by the partnership event, gender, or the other variables in the model. The most important variable in the first model explaining *change in psychological health* is social support and change in social support. With the exception of the more critical events (separation/divorce and becoming widowed), the variable partnership event does not have a strong influence on *change in psychological health*. Explaining *health status at a given point in time*, by contrast, provides a better model fit. Also in this model, partnership events–except the event widowed to new partnership/marriage–and socio-demographic variables lose relevance; the variables contributing significantly to variance in psychological health are social support (or change thereof), material situation (assessment of living standard and change) and cumulative disadvantage during youth.

In sum, the results display two different dimensions to assess psychological health around partnership events: (i) disadvantages from the individual's social origin reflect the cumulative social and material resources for psychological health at a given point in time, however, these are not important for change in health due to a partnership event. (ii) Indeed, apart from the event separation/divorce contributing to explaining change in health, only perceived potential social support (and change thereof) is a further explanatory variable. This result suggests that the present social environment (feelings of social belonging) appears to be important when family life and daily routine need to be reconstructed without a spouse/partner after an event that was not foreseen in the life cycle of a family and where re-orientations are required (Klauer and Filipp, 1995); in addition, it might reveal stress beyond the adjustment to daily life due to partnership conflicts.

Consequently, we tentatively conclude that the partnership events studied do not intersect with cumulative disadvantage, assessment of living standard (economic positioning) or social environment (social support and change there of). Moreover, although partnership events and the present social environment are important to explain a *change in psychological health*, the time-lagged impacts of social position-

10 Interesting in this context is the distinction between *subjective* (self-assessed) well-being and *psychological* health or well-being. The comparison of the trajectories of *psychological* health between men and women in this article show parallel movements. A similar analysis on *subjective* well-being, however, presents diverging trajectories (Budowski, Masia, and Suter, 2008) suggesting that *subjective* well-being represents an assessment and *psychological* well-being certain psychological impediments in daily life.

ing during youth prove to be relevantin explaining psychological health status at a given point in time in this analysis.

The question asked regarding the intersection of life course event (partnership) and cumulative disadvantage needs further research. In particular a more refined operational definition of cumulating disadvantages over a larger time span not restricted to youth may provide clearer results.

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