Unemployment, Social Capital, and Subjective Well-Being

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DISCUSSION PAPER SERIES

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ABSTRACT

Unemployment, Social Capital, and Subjective Well-Being[*]

It has been shown in past research that unemployment has a large negative impact on subjective well-being of individuals. In this paper, I explore whether and to what extent people with more social capital are sheltered from the harmful effects of unemployment. Using data from the German Socio-Economic Panel 1984-2004, I find that social capital is an important predictor of well-being levels, but there is no evidence that it moderates the effect of unemployment on well-being. The well-being loss, in turn, is shown to predict job search and re-employment. Possible reasons for these findings are discussed, and suggestions for future research are given.

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1 Introduction

It has been shown in past research that individual unemployment has a large negative effect on subjective well-being (Clark and Oswald, 1994). This mirrors the well documented effect of unemployment on physical health and on mental health (Wilson and Walker, 1993). This negative effect appears to be causal: we know from panel data estimators that the association persists once we follow the same individuals over time, and thereby control for individual specific fixed effects (Winkelmann and Winkelmann, 1998). Neither is it the case that unemployed people have a completely different personality, or that they anchor their responses on the well-being scale in a way that is systematically differently from the way employed persons anchor theirs. Nor does it seem that there is an instance of reversed causation, i.e., that unhappiness causes unemployment (or, for that matter, that happiness leads to idleness).

It is also clearly understood that the negative effect of unemployment on well-being goes well beyond the effect that the income loss associated with unemployment can bring about. Indeed, the non-pecuniary cost of unemployment seem to exceed the pecuniary cost by far. It is less clear, however, what the ultimate origins of, and mechanisms behind, this well-being loss are. To explore this issue, essentially two types of approaches have been used in the previous literature.

The first focuses on the psychological correlates of unemployment. Goldsmith, Veum and Darity (1996a) show, using data on 14-21 year olds drawn from the US National Longitudinal Survey of Youth, that joblessness reduces an individual's perception of self-worth, self-esteem and increases the incidence of symptoms of depression. Goldsmith, Veum and Darity (1996b) focus their analysis on the psychological concept of being an internal versus an external person. Internalizers are individuals who believe they are masters of their own fate and thus feel in control of their lives. The analysis shows that longer unemployment spells increase the incidence of external behavior, leading to a reduced locus of control and feelings of helplessness, and thus overall diminished psychological health.

The second type of studies look at unemployment in a social context. This literature is a

special case of a wider analysis of well-being interactions at large. For example, there is by now a substantial literature on status interdependence in well-being. The effect of income on well-being, for example, depends to a large extent on the relative income position within one's reference group (such as neighbors, colleagues, etc.) (see, for example, Luttmer, 2005, Clark and Oswald, 1996). Within the family, there is strong evidence for direct preference interdependence (Schwarze and Winkelmann, 2005).

With regards to the effect of unemployment on well-being, the previous literature has pointed to social norms as a salient feature of social interactions. Clark (2003) reports that the well-being of the unemployed is the higher, the higher the unemployment rate in a reference group (at the regional, partner or household level, see also Shields and Wheatley Price, 2005). Apparently, the more unemployment becomes the norm, the less individuals are affected by it. Lalive and Stutzer (2004) obtain the same result, albeit with a different identification strategy. Using Swiss data, they exploit the community variation in a referendum vote on an employment issue to define the social norm. The stronger the norm, the more quickly unemployed people find a new job, and the reduction in life-satisfaction is the larger, the stronger the norm is.

In this paper, I want to explore the empirical relevance of another aspect of social interaction for the well-being loss due to unemployment, namely the importance of social capital. Broadly speaking, the question is whether and to what extent people with more social capital are sheltered from the harmful effects of unemployment. There is some evidence that social capital, defined as participating in social networks and in social activities, is beneficial for subjective well-being (Helliwell and Putnam, 2005). The research question of this paper is different, namely whether social capital moderates the effect of unemployment on subjective well-being. The main argument would be that people with a larger social network and many alternative uses of their time might not be as much exposed as others to the adverse psychological mechanisms of unemployment documented in Goldsmith, Veum and Darity (1996a,b). For example, if a person engages in many cultural, sport and volunteering activities as a worker, it would appear to be relatively simple for such a person to expand the time spent on these activities in the event of unemployment.

To test the hypothesis of social capital as a moderator variable, I make use of a relatively large sample of employment-unemployment transitions in the German Socio-Economic Panel. For people undergoing such a transition – being employed in one year, and being unemployed in the next round of the annual interviews – one can compute the individual change in subjective well-being associated with that transition. The next step is then to explain the heterogeneity in subjective well-being changes following unemployment in terms of other factors. Why do some people "suffer" more from unemployment than others?

A unique feature of the employed data set is its sheer magnitude. There is information on 5,536 such transitions. This size distinguishes the present research from previous studies using a similar set-up. Winkelmann and Winkelmann (1998) and Clark (2003) - the latter for the British Household Panel Study - have only around 300 transitions at their disposition. The larger number in the current GSOEP is due to the long time span of the sample as 21 years of data were available for this analysis, as well as to the more recent booster samples, and it opens, at least in principle, the door to a much more detailed analysis. In addition, the GSOEP provides a relatively rich set of variables on social capital. The ones used here will relate both to daily time use and to activities that are undertaken regularly.

I focus in this paper on social capital and a handful of socio-demographic background variables. Other sources of heterogeneity, some of them suggested by the previous literature, could be explored in addition. For example, I don't include unemployment rates of reference groups explicitly. As long as these reference effects are unrelated to the social capital effects of interest here, their omission does not lead to bias. A model with interacted time and region effects implicitly captures the potential influence of such social norms, while leaving the main effects largely unaffected.

Another concern often raised in the subjective well-being literature is that of adaptation. Individuals might learn how to live with unemployment over time, or downward adjust their expectations. While there is ample evidence for adaptation with regard to income and other pecuniary aspects of life (Easterlin, 2006), it also seems to be the case that adaptation to unemployment is non-existent or very moderate only (Clark, 2002, Winkelmann and Winkelmann 1998). Because

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the sampling scheme adopted in this paper is based on yearly employment-to-unemployment transitions, spells tend to be relatively short. There is, in fact, a maximum duration of (on average) 11 months imposed. Hence, the analysis cannot be informative with respect to putative adaptation processes to long-term unemployment. On the other hand, it is important to keep in mind that unlike in the US where most unemployment spells are very short and the expected subjective well-being effects for this particular group of workers should be relatively minimal, the average duration is much greater in the context of the German or other European labor markets, and unemployment tends to become a long-term problem for the affected individuals.

2 Data

The empirical analysis is based on data from the German Socio-Economic Panel (GSOEP). The annual panel survey was initiated in 1984, initially for West Germany including just under 6,000 households at the time. The sampling frame was extended to include about 2,000 East German households as early as June 1990. Since this round of interviews preceded the currency union on July 1 and the formal re-unification on Oct. 3 of that year, I drop these observations and include observations on East German households only from 1991 onwards. To counter the adverse effect of panel attrition on the sample sizes, supplementary booster samples were added in 1998 (about 1,100 households) and in 2000 (about 5,000 households). At current, the GSOEP interviews more than 20,000 individuals living in more than 10,000 households annually. The latest survey year available for this analysis was the year 2004.

The sample employed in this paper consists of all individuals in the sample that made a transition from employment to unemployment between two consecutive survey years. Over the full stretch of the available panel 1984-2004, there are 5,536 such transitions. Compared to earlier related papers looking at such work-to-unemployment transitions, where only a few hundred observations were available, this is a huge difference. As a consequence, one would hope that with such a sample, it becomes meaningful not only to calculate mean changes in subjective well-being, but

in addition to explore the determinants of heterogeneity in these changes.

Two more general comments should be made regarding the sample set-up. First, since the sampling is conditional on being observed in employment in t and on being observed in unemployment in $t + 1$, there is a natural upper limit to the elapsed duration of the unemployment spell at the time of the second interview in $t + 1$. The exact upper limit depends on the month of the interview. If the interviews took place in the same month in the two years, the unemployment spell cannot have been ongoing for more than 11 months. Of course, if the interview in t took place early in the year, and late in $t + 1$, longer spells up to a theoretical maximum of 23 months are possible. Still, the average spell length in our sample must be shorter than the average spell-length in the population of all unemployment spells, and we cannot really make statements about the well-being of the long-term unemployed with this kind of sample. In many cases, it is actually possible to merge the annual data with spell data from the calendar entries, and to determine the exact length of the unemployment spell (in months). I find, for example, that 28 percent of such spells lasted for less than two months at the time of the interview.

A second comment is that unemployment is based here on the registration criterion. This definition, while in some sense not ideal, is dictated by data considerations. Simply put, the questions on active search and availability were not asked in the earlier years of the GSOEP (until and including 1993). Unemployment was at the time defined in terms of not working and being registered. Thus, if one wanted to focus on the narrower definition, the sample size would be cut almost by half (actually a bit less due to the extension of the sample size in the later periods). Part of the analysis will look at the incidence of job search as well. Naturally, these results are then based on a correspondingly smaller subsample.

3   Empirical Results

The general empirical strategy is as follows. For each person, we observe two measures of subjective well-being, one while being employed and another (roughly) one year later while being unemployed.

The relevant information on subjective well-being is the response to the question, posed always at the end of the interview, "How satisfied are you with your life, all things considered? Please answer according to the following scale: 0 means completely dissatisfied, 10 means completely satisfied". Regression analysis will be used to test the hypothesis that social capital moderates the effect that unemployment has on subjective well-being. Social capital is operationalized using a number of questions that will be detailed below. To guard against potential omitted variable bias, I also control for a host of common socio-economic background variables that have been identified by the past literature as important predictors of subjective well-being, plus time and region effects and all interactions thereof. One concern of the previous literature was the potential dependence of subjective well-being on personality factors. Such factors, if unaccounted for, can again lead to bias. In the present application, the object of interest is the *change* in well-being. Thus, personality effects are in fact accounted for, as long as they are time-invariant - as usually assumed - and as long as they affect the well-being levels rather than the well-being/unemployment gradient.

Table 1 reproduces the well-known result that people are on average less well off when being unemployed rather than employed. For men, the average drop in well-being amounts to 0.85 (on the 0-10 scale); for women it is 0.55. We see that the mean age is 39 for men and 38 for women. 58 and 60 percent, respectively, are married. Only 5 percent have a university degree (this includes polytechnic schools / Fachhochschulen). Foreigners and East Germans are overrepresented relative to what one would expect from a random sample of the German resident population, but not necessarily so from the unemployment population.

Figure 1 documents the amount of heterogeneity in these well-being responses to unemployment. For four percent of men, and six percent of women, becoming unemployed is associated with a well-being loss of five or more, all on the 0-10 well-being scale. For 43 percent of men, and 48 percent of women, the well-being loss runs between minus and minus four. The remaining persons report no change, or even an increase in subjective well-being. A first pass at the socio-economic correlates of the well-being loss is given in Table 2. For example, the share of men is larger in the "≤ 5" category (62 percent) than in the "≥ 0" category (52 percent). Hence, in this bivariate contrast,

there appears to be a positive association between being male and experiencing a large well-being loss. Going down the list of variables suggests that the well-being loss is greater if the number of previous spells is smaller, if the person is a foreigner, if the person is young, single, without a university qualification, and living in West Germany.

No formal tests for significance of these associations are reported here, as these results, while being suggestive, can anyway not answer the more pertinent question of ceteris paribus effects. These are determined by regressions as reported in Table 3. Tests of individual significance can be based on the standard errors in parentheses. The standard errors account for clustering at the individual level, since some persons are included with several transitions in the sample.

Table 3 includes the socio-economic background variables, but does not control for social capital yet. The two concerns of the previous literature, adaptation and reference comparisons (social norms), while peripheral to the main concern of this paper, are implicitly picked up in these regressions. There appears to be some habituation effects, as unemployment "hurts less" for persons who had already previous unemployment spells. This effect is stronger for women than for men. On the other hand, the duration of the current spell - whether or not it lasted for at most two months, does not make a difference. As mentioned above, we cannot determine from this kind of sample, whether people adjust to their state once the spell is ongoing for a longer period of time, a year, or a year and a half or longer.

The importance of social norms - if acting for example through the regional unemployment rates - is captured in the region specific time effects. These are significant as a group. It is not possible to include an East German dummy in addition to these region effects. However, the bivariate evidence in Table 2 showed that unemployment was associated with a smaller well-being loss in East Germany - where unemployment rates are much higher. This evidence is compatible with a social norm-based explanation. Table 3 confirms that men suffer more from unemployment than women, and also that younger persons are more affected than older ones.

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4 Measuring Social Capital

Social capital is difficult to measure, as are indeed human and physical capital. There is no universally agreed definition. According to Putnam (2000, p. 19), "social capital refers to connections among individuals - social networks and the norms of reciprocity and trustworthiness that arise from them." Social capital can be measured at the community and at the individual level. Attempts to operationalize social capital have focused on the incidence and intensity of political and social engagement (voting, volunteering in political or social organizations), informal social ties (such as entertaining friends at home), tolerance and trust.

The definition used in this analysis is dictated by the questions available in the German Socio-Economic Panel. While questions on tolerance and trust have been included only 2003, there have been questions on participation in social and political activities in earlier rounds of the survey. These questions were included repeatedly but not always. As a consequence, all analyses using these social capital indicators are based on samples smaller than the original full 5,536 transitions.

I concentrate here on six distinct activities, and the question whether or not the person engages in any of these activities with a frequency of at least once a week. The selected activities include attending cultural events, attending entertainment events, engaging in active sports, visiting friends, relatives or neighbors, engaging in voluntary work in political or social organizations, and attending church services.

Of course, "at least once a week" is still a rather broad measure, and there will be substantial variation in intensity at which participants engage in these activities. An additional measure of time use might therefore provide further insight. Here, the question is how many hours are spend on average per weekday on a number of broad activities, one of them being "hobbies" (as opposed to work, housework, education and training, repairing and other chores).

To implement these variables in practice, timing becomes an issue. In principle, activities can be measured at time t (when the person is employed) or at time $t+1$, when the person is unemployed. A first question is then whether individuals change their activity pattern as a result of unemployment.

However, if one thinks of social capital as a stock that results from an accumulation process based on past investments, a preferred measure might be the long-term engagement in such activities, as approximated by the average participation rate over all periods a person is observed in the data (and thus not just t and $t + 1$). The following empirical analysis allow for both possibilities, including either a period-based or an average measure of activities.

Table 4a shows the incidence and changes of participation patterns for men, Table 4b repeats the analysis for women. Among employed men, 11 percent report attending entertainment events (this includes sports and the movies) at least once a week, 18 percent engage in active sports, 39 percent visit friends and relatives, and 8 percent regularly perform voluntary work in political or social associations. Interestingly, the relative frequencies do not change much when the same people are unemployed. Certainly, the differences are not significant, and the point deviations are small. Thus, no measurable adjustment seems to take place. When looking at hours, however, we see that the time spent on hobbies increases markedly, from .7 hours per day for the unemployed to 2.4 hours a day for the unemployed. For women, the activity patterns are very similar. The main difference is that unemployed women extend less the hours spent on hobbies (only by 1.1 hours) and more the hours spent on housework (by 1.9 hours), relative to what they did while working.

5 The Effect of Social Capital on Well-Being

Helliwell and Putnam conclude their analysis by stating that "social capital is strongly linked to subjective well-being through many independent channels and in several differtent forms." (2005, p. 455). Theirs is a statement about the level of subjective well-being. To reproduce their findings in the context of the GSOEP data, Table 5 reports estimates from an augmented subjective well-being regression model, where social capital variables are included in addition to the standard socio-economic variables. The models are estimated separately for men and women, and in two specifications, a first with the period specific activity variables and a second with the average activity variables. The sample sizes are now substantially larger, since all individuals with valid

information are included, not only those transiting from employment to unemployment. The evidence supports the prior claims on the importance of social capital. With the exception of the attendance of entertainment events, all activities have a positive and statistically significant effect on subjective well-being. Quantitatively the largest effect emanates from sport (which must not be causal, as it may also capture in part the positive association between good physical health and sports) and, for women, the attendance of cultural events.

Table 6 shows regression results for well-being loss as dependent variable. The regressions differ in three aspects from those in Table 3. First, it includes the social capital variables. Second, due to that fact and because information on social capital is missing for some years and some individuals, the sample sizes are considerably reduced. And third, I do not control for region and time effects (this preserves degrees of freedom, and doing does not change the main conclusions in any way).

Recall the central question of the paper, namely whether more social capital shields people from the harmful impact of unemployment on well-being. In other words, do people with a larger social capital experience a smaller well-being loss when becoming unemployed than others, ceteris paribus, after controlling for other determinants (these are not shown in Table 6; they include nationality, age, marital status, education, East Germany). The answer to this question seems to be "no". Regardless of whether men or women are considered, and whether activities in t or average activities are used, practically all the effects are individually insignificant. If anything, there is some evidence that for women attending church services regularly has a moderating impact on the well-being loss. More importantly, though, one cannot reject the null-hypotheses of no explanatory power, using the standard F-tests, in three out of four cases. In other words, the individual level variation in subjective well-being responses appears to be random and unrelated to any other measurable individual level characteristics, including social capital.

This is a rather unexpected result. A-priori, one would expect that if variation in well-being *levels* across individuals are substantially and robustly related to socio-economic characteristics, then some such effects should be also found for variation in well-being *changes* across individuals. Two potential explanations for the absence of such a finding come to mind. First, it is clear

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that social capital is measured with error. This is a measure of weekly incidence and intensity is not captured beyond that. Moreover, people may misreport their activities. Under the classical measurement error assumptions, this could bias the results towards finding no effect. A second possibility is related to the sampling scheme adopted in this study. If individuals with a larger well-being loss search harder for a new job, and become re-employed at a faster rate, then they will tend to be underrepresented in the data, and we would face an instance of typical sample selection bias: the probability of inclusion in the sample depends on the outcome of the dependent variable. Again, such sample selection will lead to attenuation bias, i.e., an underestimation of the absolute value of any true marginal effect in the population.

We can shed some light on the potential relevance of such an effect by studying whether, within our sample, people with a larger well-being loss of unemployment search harder and become re-employed faster compared to those reporting a smaller well-being loss. To this end, define two outcomes. "Active search in $t+1$" is a binary indicator variable that is one if the individual, besides from being registered as unemployed, has also engaged in active search during the previous four weeks. "Re-employment in $t+2$" is also a binary indicator variable which is one if the individual transited out of unemployment by the time of being re-interviewed in the following year. Since both variables are binary, probit models are used. The key explanatory variable is the change in subjective well-being from period t to period $t+1$, ΔSWB. Note that ΔSWB is typically negative. If the estimated coefficient is negative, this means that a larger well-being loss increases the probability of searching and, eventually, finding a job.

The results in Table 7 show that this is the case indeed, controlling for other socio-demographic variables. To interpret the coefficients, note that the marginal effect is obtained by multiplication with an adjustment factor that depends on the individual and is given, for the average individual, in the last row of the Table. Thus, each extra point of well-being loss (on the 0-10 scale) following unemployment increases the probability of active search by a predicted 2.7 percentage points, and the probability of re-employment by a predicted 1.2 percentage points. These effects are statistically significant.

We are left with two main conclusions. First, well-being changes are informative for observed behavior. Although it is difficult to predict well-being changes based on social capital and other variables, these changes by themselves predict behavior, and they are in this sense by no means purely random. Second, these results give some credence to the sample selection interpretation. The well-being regressions might be subject to some attenuation bias, because individuals with the largest well-being losses are less likely to be included in the sample.

6 Discussion

In this paper, I have analyzed data from the German Socio-Economic Panel 1994-2004, extracting a sample of individuals who transited from employment to unemployment between two interviews. The data confirmed the standard result that there is a sizeable reduction in subjective well-being during unemployment. The paper then proceeded in investigating the determinants of variation in well-being loss due to unemployment between people. In particular, I advanced the hypothesis that more social capital reduces the harmful effect of unemployment on well-being.

This hypothesis could not be confirmed by the data. While social capital was shown to have a significant positive effect on well-being levels, the effects on well-being differentials generated by unemployment, while in general positive, were measured to imprecisely to reject the hypothesis of no effect. Finally, it was found that well-being differences have a significant impact on search behavior. Those with a larger loss are more likely to search actively, and find a job over the next year.

We are left with a puzzle. While we are likely to agree that more social capital is a good thing to have – there is strong evidence that it is associated with increased well-being and we also suspect, notwithstanding the inconclusive results of the present analysis, that it weakens the detrimental effect of unemployment on well-being – this very same effect would tend to increase the duration of unemployment, on the face of it an undesirable outcome. Is it then better, when confronting unemployment, to have low social capital after all?

Most likely not. For one, it might still be the case that the duration effect falls short of the direct well-being effect, so that the integrated well-being loss due to unemployment is smaller for those with more social capital. More comforting, though, an additional regression not shown in the paper demonstrates that the probability of re-employment actually increases with social capital. This suggests that there are strong labor demand effects that increase the offer arrival rates for those with more social capital, more than compensating for any putative negative supply effect.

Obviously, more work needs to be done on the question of how unemployment, social capital and well-being interact. Neither the presence nor the absence of a causal effect of a social capital channel regarding the size of the well-being loss due to unemployment could be definitely established. We are still a long way from a definite answer to the question "Why are the unemployed so unhappy". Still, the results and patterns presented in this paper seem sufficiently strong and intriguing to justify further research in this area, using improved methods and the continuously expanding data base provided by the GSOEP.
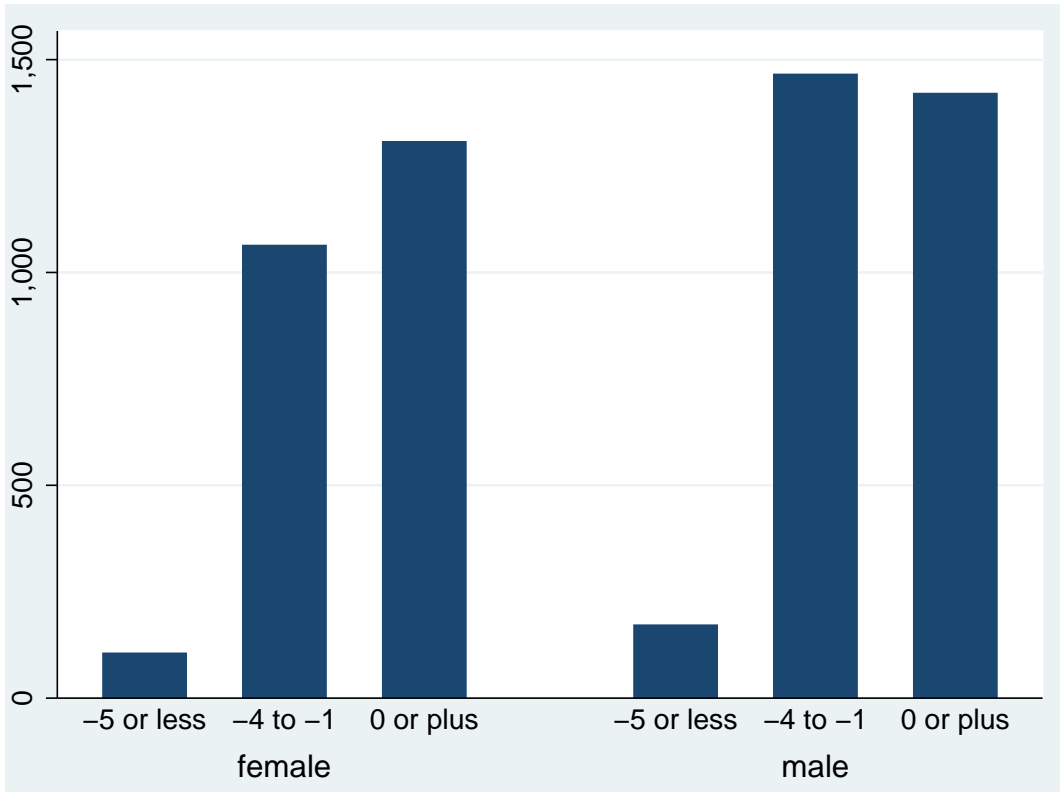
Figure 1: *Distribution of well-being loss of the unemployed, by sex* .

TABLE 1: Descriptive Statistics

	Men (n=3059)	Women (n=2477)
SWB in t (while employed)	6.478	6.438
	(0.036)	(0.039)
SWB in $t+1$ (while unemployed)	5.624	5.890
	(0.039)	(0.042)
German nationality	0.767	0.828
	(0.008)	(0.008)
Age	39.372	38.377
	(0.241)	(0.243)
Older than 45	0.391	0.343
	(0.009)	(0.010)
Married	0.578	0.597
	(0.009)	(0.010)
University graduate	0.047	0.055
	(0.004)	(0.005)
East Germany	0.363	0.421
	(0.009)	(0.010)

TABLE 2: SWB-loss and socio-economic characteristics

	Change in SWB from t to $t+1$		
	-5 or more	-1 to -4	0 or positive
Male	0.619	0.579	0.521
	(0.029)	(0.010)	(0.010)
# of previous spells	0.205	0.241	0.270
	(0.034)	(0.011)	(0.011)
Duration $\leq$ 2 months	0.255	0.295	0.292
	(0.037)	(0.013)	(0.012)
German nationality	0.723	0.781	0.814
	(0.027)	(0.008)	(0.007)
Age	35.525	37.830	40.290
	(0.706)	(0.250)	(0.248)
Older than 45	0.263	0.334	0.413
	(0.026)	(0.009)	(0.009)
Married	0.496	0.573	0.608
	(0.030)	(0.010)	(0.009)
University graduate	0.043	0.045	0.057
	(0.012)	(0.004)	(0.004)
East Germany	0.245	0.389	0.405
	(0.026)	(0.010)	(0.009)
Number of Observations	278	2530	2728

TABLE 3: Regression of SWB-loss on socio-economic characteristics

Dependent variable: SWB_{t+1} - SWB_t			
	All	Men	Women
Male	-0.275		
	(0.060)		
# of previous spells	0.098	0.084	0.158
	(0.048)	(0.066)	(0.076)
Duration $\leq$ 2 months	-0.038	0.094	-0.101
	(0.090)	(0.129)	(0.131)
Duration not known	-0.034	0.026	-0.065
	(0.069)	(0.099)	(0.099)
German nationality	0.122	0.052	0.188
	(0.092)	(0.123)	(0.147)
Aged 25-34	0.184	0.441	0.019
	(0.107)	(0.150)	(0.157)
Aged 35-44	0.062	0.278	-0.001
	(0.109)	(0.152)	(0.164)
Aged 45 or older	0.326	0.564	0.186
	(0.104)	(0.149)	(0.153)
Married	0.028	-0.053	0.096
	(0.074)	(0.106)	(0.109)
University graduate	0.146	0.031	0.224
	(0.138)	(0.193)	(0.211)
Region/time interactions	yes	yes	yes
Number of Observations	5536	3059	2477
R-squared	0.07	0.11	0.13
Prob > F	0.00	0.01	0.00

TABLE 4a: Employment Status and Non-Work Activities (Men)

	Obs.	Employed (t)	Obs.	Unemployed ($t+1$)
Reported activities with at least weekly frequency				
- attending cultural events	2070	0.010	2070	0.012
		(0.002)		(0.002)
- attending entertainment events	1944	0.110	2070	0.091
		(0.007)		(0.006)
- sport	2070	0.181	2070	0.196
		(0.008)		(0.009)
- visiting friend, relatives	1433	0.394	1424	0.429
		(0.013)		(0.013)
- engaging in voluntary work	2070	0.076	2070	0.060
		(0.006)		(0.005)
- attending church services	1703	0.056	1784	0.063
		(0.006)		(0.006)
Hours spent during weekdays on				
- housework	2545	0.057	2415	0.366
		(0.011)		(0.027)
- hobbies	2303	0.678	2295	2.413
		(0.037)		(0.071)
- education, training	2562	0.205	2599	0.225
		(0.025)		(0.027)
- repairing	2486	0.135	2427	0.710
		(0.016)		(0.039)

TABLE 4b: Employment Status and Non-Work Activities (Women)

	Obs.	Employed (t)	Obs.	Unemployed $(t+1)$
Reported activities with at least weekly frequency				
- attending cultural events	1613	0.004	1708	0.008
		(0.002)		(0.002)
- attending entertainment events	1544	0.060	1708	0.053
		(0.006)		(0.005)
- sport	1613	0.161	1708	0.176
		(0.009)		(0.009)
- visiting friend, relatives	1142	0.356	1197	0.387
		(0.014)		(0.014)
- engaging in voluntary work	1613	0.032	1708	0.036
		(0.004)		(0.004)
- attending church services	1352	0.055	1492	0.052
		(0.006)		(0.006)
Hours spent during weekdays on				
- housework	1693	1.239	1618	3.102
		(0.055)		(0.070)
- hobbies	1905	0.454	1790	1.539
		(0.035)		(0.066)
- education, training	2057	0.228	2047	0.354
		(0.029)		(0.036)
- repairing	2066	0.048	1998	0.146
		(0.011)		(0.019)

TABLE 5: Are people with a more active social life happier?

Dependent variable: SWB in t				
	Activities in t		Average activities	
	male	female	male	female
Unemployment	-1.166	-0.864	-1.317	-0.908
	(0.034)	(0.034)	(0.021)	(0.021)
German nationality	0.204	0.292	0.105	0.211
	(0.025)	(0.026)	(0.014)	(0.015)
Married	0.315	0.361	0.340	0.396
	(0.021)	(0.018)	(0.012)	(0.011)
University graduate	0.216	0.122	0.183	0.090
	(0.028)	(0.034)	(0.016)	(0.020)
East Germany	-0.644	-0.591	-0.617	-0.569
	(0.020)	(0.020)	(0.012)	(0.012)
Attending cultural events	0.179	0.382	0.370	0.614
	(0.069)	(0.070)	(0.074)	(0.073)
Attending entertainment events	0.008	0.052	-0.101	-0.068
	(0.031)	(0.039)	(0.031)	(0.039)
Sport	0.289	0.284	0.427	0.502
	(0.021)	(0.021)	(0.016)	(0.017)
Visiting friend, relatives	0.170	0.281	0.224	0.374
	(0.019)	(0.018)	(0.015)	(0.015)
Engaging in voluntary work	0.124	0.202	0.155	0.186
	(0.030)	(0.040)	(0.022)	(0.032)
Attending church services	0.150	0.230	0.212	0.350
	(0.030)	(0.027)	(0.019)	(0.018)
Observations	41991	44940	133270	141797
R-squared	0.083	0.077	0.084	0.075

All models include three age dummies and a constant

TABLE 6: Are people with a more active social life better prepared for unemployment?

Dependent variable: ΔSWB	Activities in t		Average Activities	
	male	female	male	female
Activities:				
Attending cultural events	0.062	-1.377	0.439	0.188
	(0.599)	(1.192)	(0.886)	(0.832)
Attending entertainment events	-0.062	0.088	0.086	-0.347
	(0.231)	(0.339)	(0.378)	(0.248)
Sport	-0.079	-0.133	0.031	-0.014
	(0.181)	(0.212)	(0.175)	(0.154)
Visiting friend, relatives	0.158	-0.016	0.081	0.133
	(0.147)	(0.161)	(0.143)	(0.132)
Engaging in voluntary work	0.028	-0.035	0.056	0.048
	(0.265)	(0.390)	(0.374)	(0.236)
Attending church services	0.155	0.549	0.289	0.355
	(0.304)	(0.290)	(0.236)	(0.208)
Observations	1066	881	2919	2382
R-squared	0.02	0.02	0.02	0.00
Prob > F	0.21	0.12	0.00	0.70

Further controls include: nationality, age, marital status, education, East.

TABLE 7: How does the SWB change affect search and re-employment? (Probits)

	active search $(t+1)$	re-employment $(t+2)$
ΔSWB	-0.073	-0.031
	(0.011)	(0.009)
Male	0.003	0.123
	(0.043)	(0.038)
German nationality	-0.081	0.133
	(0.064)	(0.053)
Aged 25-34	-0.158	-0.048
	(0.076)	(0.062)
Aged 35-44	-0.113	-0.159
	(0.079)	(0.066)
Aged 45 or older	-0.676	-0.895
	(0.075)	(0.064)
Married	-0.075	-0.002
	(0.050)	(0.045)
University graduate	0.288	0.378
	(0.100)	(0.087)
East Germany	0.140	-0.062
	(0.046)	(0.042)
Observations	3836	4749
Log-likelihood	-2247.6	-2886.2
$\bar{y}$	0.64	0.40
$\phi(\Phi^{-1}(\bar{y})$	0.37	0.39

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