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Unhappiness and Job Finding

Anne C. Gielen
Jan C. van Ours

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of Labor

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Anne C. Gielen
IZA, ROA and METEOR, Maastricht University

Jan C. van Ours
CentER, Tilburg University,
University of Melbourne, CESifo, CEPR and IZA

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IZA

P.O. Box 7240
53072 Bonn
Germany

Phone: +49-228-3894-0
Fax: +49-228-3894-180
E-mail: iza@iza.org

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ABSTRACT

Unhappiness and Job Finding*

It is puzzling that people feel quite unhappy when they become unemployed, while at the same time active labor market policies are needed to bring unemployed back to work more quickly. Using data from the German Socio-Economic Panel, we investigate whether there is indeed such a puzzle. First, we find that nearly half of the unemployed do not experience a drop in happiness, which might explain why at least some workers need to be activated. In addition to that, we find that even though unemployed who experience a drop in happiness search more actively for a job, it does not speed up their job finding. Apparently, there is no link between unhappiness and the speed of job finding. Hence, there is no contradiction between unemployed being unhappy and the need for activation policies.

JEL Classification: I31, J64

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Corresponding author:

Jan C. van Ours
CentER
Tilburg University
P.O. Box 90153
5000 LE Tilburg
The Netherlands
E-mail: vanours@uvt.nl

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1 Introduction

There seems to be a striking inconsistency between two empirical findings in unemployment studies. First, there is the well-known finding that unemployed are unhappy. This unhappiness goes beyond the drop in income that most individuals experience when they become unemployed. Hence, unemployment is not only associated with monetary costs but also with non-pecuniary costs, reflected by lower self-reported life satisfaction and other mental well-being scores, as is shown in a growing number of happiness studies (e.g. Clark and Oswald (1994), Winkelmann and Winkelmann (1998), Kassenboehmer and Haisken-DeNew (2009)). Second, many studies find that activation programs are very effective in bringing unemployed back to work. Unemployed spend a long time in unemployment, and government interventions through active labor market programs (e.g. Lalive et al. (2008)) or sanctions (e.g. Van den Berg et al. (2004); Abbring et al. (2005); Arni et al. (2009)) can significantly increase the re-employment rate of unemployed workers.

These two empirical findings give rise to a puzzle: why do unemployed workers need to be stimulated to find a new job more quickly if being unemployed makes them unhappy? Given the large drop in happiness upon entering unemployment, one might expect that even in the presence of positive search costs a direct incentive to search more actively for a job is not needed. If unemployed workers would act on their unhappiness, a drop in happiness should induce them to find a job more quickly. The current paper investigates the relationship between unhappiness and job finding rates to address the question whether indeed there is a puzzle or an inconsistency.

Several studies report that life satisfaction drops when someone becomes unemployed. One possible explanation for this is the presence of social norms to working (Stutzer and Lalive (2004)), which is tempered if the unemployed person knows more people, such as friends and family, that are unemployed too (Clark, 2003). Clark et al. (2010) illustrate that the drop in happiness varies with aggregate economic conditions. Just as in the literature on job mobility, which shows that workers are more likely to search for a new job the unhappier they are in their current job (e.g. Freeman (1978), Clark et al. (1998), Clark (2001), Lévy-Garboua et al. (2007), Delfgaauw (2007), Green (2010)), one would expect that a drop in self-reported life satisfaction will affect job search behavior of unemployed. Indeed, Clark (2003) who uses a measure for mental wellbeing (GHQ-12) from BHPS shows that unemployed whose mental wellbeing dropped by more than two points when

they entered unemployment are more likely to actively search for a new job one year later, and consequently are less likely to be still in unemployment the following year.[1] Alternatively, unemployed might become discouraged from searching vigorously for a job due to the psychological costs of job search (Krueger and Mueller, 2011), which come on top of the psychological cost from being unemployed. As yet, the question of why the drop in life satisfaction for unemployed workers does not eliminate the need for activation programs remains unanswered.

The current paper adds to the literature by providing an explanation for why the drop in happiness is not sufficiently effective in getting unemployed back to work, and why activation programs are needed to improve re-employment chances. Using 1994–2007 GSOEP data, we show that there is a significant amount of variation in the change in happiness upon entering unemployment. Although unemployment makes people unhappy on average, nearly half of the unemployed do not experience a drop in happiness when becoming unemployed. This might explain why at least some workers need to be activated. In addition to this, our analyses clearly show that even for those who do experience a drop in happiness there is no relation between unhappiness and job finding. Since unhappiness does not seem to trigger a higher job finding rate, there is no contradiction between unemployed being unhappy and the need for activation policies to stimulate unemployed to find a job more quickly.

The paper is set up as follows. Section 2 presents the data and section 3 shows how happiness of German workers is affected by labor market transitions from paid employment to unemployment. The analysis confirms the well-known empirical finding that becoming unemployed causes a big drop in life satisfaction. Section 4 presents the empirical analysis of job finding rates and the way these are affected by life satisfaction. Section 5 shows how the change in happiness affects the quality of post-unemployment jobs. Finally, section 6 concludes.

[1] Mavridis (2010) using BHPS data finds that a drop in mental well-being reduces unemployment duration. However, as we discuss in more detail later on, this may be a consequence of his empirical strategy. It could also be that mental well-being is an indicator that differs from life satisfaction. Björklund (1985) for example finds no effect of unemployment on mental health.

2 GSOEP data

In our empirical analysis we use data from the German Socio-Economic Panel (GSOEP), an annual panel survey representative for the resident German population aged 18 years and older, for the period 1994-2007.[2] In 2007, there were nearly 11,000 households, and more than 20,000 persons sampled. The dataset contains extensive information on both the individual and the household level, such as labor market position and transitions, as well as detailed information about satisfaction measures.

Our study uses information on the duration in unemployment (in months), starting between 1994 and 2006, and ending between 1994 and 2007 (see the appendix for details). Information on life satisfaction is based on the question "We would like to ask you about your satisfaction with your life in general", where the individuals could report their happiness on a 11-point scale, ranging from 0 "Totally unhappy" to 10 "Totally happy". Job satisfaction is measured on a similar scale, and is obtained from the question "How happy are you with your job (if gainfully employed)". The change in life satisfaction when individuals become unemployed is denoted as Δls.

In addition to the satisfaction information we also use information on the personal characteristics of the unemployed. First, we use the individuals's age (which in the paper we recode into 4 dummy variables for the age cohorts 19-24, 25-34, 35-44, 45-54), marital status, and a dummy for the presence of children in the household. We distinguish between 4 levels of educational attainment: (0) No formal education degree, (1) Secondary school - 9 years (Hauptschule), (2) Secondary school - 10 years (Realschule), and (3) General qualification for university entrance - 12/13 years (Abitur). Vocational attainment is classified as follows: (0) No vocational degree, (1) Vocational degree, and (2) University / Technical college. In addition, we have information about (potential) income sources. We know whether or not in the previous year someone was entitled to unemployment insurance benefits, we have information about the real household income[3], and about the individual wages earned in the pre-unemployment job. Information about post-unemployment wages and job satisfaction were obtained from the next annual interview round. Since some

[2] More detailed information about the GSOEP can be found at www.diw.de/english/.

[3] This is based on the question "How high is the total monthly income of all the household members at present? Please give the monthly net amount, the amount after the deduction of tax and national insurance contributions. Regular payments such as rent subsidy, child benefit, government grants, subsistence allowances, etc., should be included."

people have already left their new job by then, and others never find a new job within the sample period, post-unemployment job information is missing for about 36 percent of unemployed males and about 48 percent of unemployed females.

Job search behavior is captured by two variables. First,individuals were asked whether or not they "have actively searched for a new job within the last three months?". Second, we use information on the unemployed's reservation wage, i.e. "How much should the net monthly pay have to be for you to consider taking a new job?". In addition to self-reported job search behavior, individuals are also asked about their perceived difficulty of finding a new suitable job (easy / difficult / extremely difficult).

Our sample is restricted to men and women aged 19-54. People aged 55 and above are excluded to avoid early retirement transitions after job loss. We removed observations for individuals that started their unemployment spell before the year 1996, and observations with missing information on educational attainment. We are left with 1636 observations for males and 1354 observations for females. A table with sample means is provided in the Appendix.

3 How unemployment affects life satisfaction

3.1 Unhappy in unemployment

Figure 1 presents the distribution of life satisfaction while employed and while unemployed. It is evident that on average for both men and women life satisfaction is lower during spells of unemployment. Table 1 illustrates the relationship between happiness and the labor market position by presenting the parameter estimates of a fixed effects ordered logit model on life satisfaction (ls). The model estimates $Pr(ls_{it} = j) = \Lambda(\tau_{ij} - X_{it}\beta - U_{it}\delta - \alpha_i) - \Lambda(\tau_{i,j-1} - X_{it}\beta - U_{it}\delta - \alpha_i)$, where j represents the response category ($j = 0, \ldots, 10$) and $\tau_{i0} = -\infty$, $\tau_{i1} = 0$ and $\tau_{i10} = \infty$. Furthermore, Λ is an indicator of the logistic distribution function, U is a dummy for being in unemployment, and τ and α are individual specific thresholds and individual fixed effects, respectively. The probability that life satisfaction for worker i equals j is the probability that the latent variable ls_i^* lies between the boundaries $j-1$ and j. Ferrer-i-Carbonell and Frijters (2004) have shown that this model can be reformulated as a fixed effects binomial logit model after choosing

an individual specific barrier k_i.[4] Applying Chamberlain's method removes the individual specific effects α and the individual specific thresholds τ from the likelihood specification. Table 1 shows that being unemployed lowers one's happiness significantly. Since (changes in) household income are controlled for, the drop in happiness goes beyond a monetary loss and also include other non-pecuniary costs of unemployment. This result follows previous findings by e.g. Winkelmann and Winkelmann (1998) and Kassenboehmer and Haisken-DeNew (2009).

There might be two potential biases to the estimated effect of unemployment on life satisfaction. First, there might be selective job loss and hence selective inflow into unemployment. The results from a fixed effects logit model for the probability of job loss and becoming unemployed (Table 2) illustrate that the inflow in unemployment is unrelated to life satisfaction while employed. Hence, the estimates from Table 1 are unlikely to be biased due to selective inflow. Second, the drop in happiness upon entering unemployment might depend on the time already spent in unemployment. Due to habituation, the effect of unemployment on the reported life satisfaction might depend on the elapsed time in unemployment at the time of the survey. Furthermore, due to the annual data collection strategy, short unemployment spells are likely to be under-represented in our sample.[5] This could be a problem for interpretation of the effect presented in the section above, if unemployment duration is a function of the change in happiness. To test whether the elapsed duration in unemployment might bias the unhappiness effect of losing a job, we exploit the variation in elapsed unemployment duration at the time of the interview. The results (Table 3) show that the timing of the interview (i.e. elapsed duration in unemployment) does not affect the life satisfaction reports while unemployed once controlling for fixed effects. Hence, there is no reason to believe that the negative happiness effect of unemployment found in Table 1 is biased.

[4] In order to transform the dependent variable we define $k_i = \sum_t ls_{it}/n_i$ where n is the total number of observations for each individual i. Then, all observations with $ls_{it} > k_i$ are transformed into $z_{it} = 1$, and all observations with $ls_{it} \leq k_i$ are transformed into $z_{it} = 0$. An alternative specification of $z_{it} = 1$ if $ls_{it} \geq k_i$ and $z_{it} = 0$ if $ls_{it} < k_i$ gives similar results.

[5] Since the interviews take place only once a year, many workers who become unemployed after the interview at date $t-1$ will have found a job already before the next interview date and hence will not appear as being unemployed in our data at survey date t.

3.2 Heterogeneous effects on happiness

The average drop in life satisfaction when becoming unemployed is 0.9 for males and 0.6 for females. However, although life satisfaction in unemployment is lower *on average*, there is substantial heterogeneity in the drop in happiness. Figure 2 shows that even though on average unemployment lowers people's happiness, nearly half of the men and women who became unemployed do not experience a drop in happiness. In fact, for about 25 percent of them life satisfaction remains the same while about 23 percent of them even experience a gain in happiness upon entering unemployment.[6]

To understand what causes these differences in the happiness effect of unemployment we investigate the determinants of (i) life satisfaction while employed (in the year before entering unemployment), (ii) life satisfaction while unemployed (in the first year of their unemployment spell), and (iii) the change in life satisfaction upon becoming unemployed.[7] Note that the sample used here only contains observations for individuals who make a transition from employment to unemployment, and for whom we can observe both life satisfaction while employed and while unemployed. The baseline results from three ordered logit models are presented in Panel A of Table 4. As shown some individual characteristics are associated with lower levels of happiness, such as age, but these level differences net out when the change in happiness is considered. Columns 3 and 6 show that household income and job satisfaction are the major factors in explaining happiness. The larger the drop in household income, the larger the drop in happiness. Furthermore, apart from any changes in household income, individuals are more likely to experience a drop in happiness when they become unemployed if they were happy with their job at the time they were still working. The results in Panel B add to this that men are more likely to experience a drop in happiness if they have experienced a previous unemployment spell. Furthermore, the expected probability of finding a job (i.e. easy, difficult or extremely difficult) seems key in the effect of unemployment on happiness. Those people who expect extreme difficulties in finding a new job experience the largest drop in happiness; people who consider it easy to find a new job might actually experience an increase in happiness when they become unemployed. The latter can be explained by the fact that they expect a very short unemployment spell, and hence they enjoy this period of having more leisure

[6]The median drop in life satisfaction is -1 for both men and women.

[7]Note that for the change in life satisfaction (iii) individual fixed effects are taken out due to first differences.

time without worrying about the future.

The main finding in this section is that even though on average unemployment is an undesirable event, nearly half of the individuals does not experience a drop in happiness upon entering unemployment. The next section investigates to what extent a drop in happiness gives an incentive to look harder for a job for those individuals who do experience a happiness reduction upon entering unemployment.

4 Life satisfaction and job finding

4.1 Unemployed's job search

Table 5 illustrates how the change in life satisfaction upon entering unemployment is associated with job search behavior of unemployed. It appears that a drop in happiness upon entering unemployment increases the probability that an unemployed has searched actively for a new job in the last 3 months. However, the wage at which unemployed are willing to take up new employment, i.e. the reservation wage, is not affected by a drop in happiness. Panel B controls for the subjective difficulty of finding a new job (where "Difficult" is the reference category). Those unemployed who consider it to be easy to find a new job don't search as hard as those who expect to experience difficulties. However, men who consider it to be extremely difficult to find a new job seem to search less as well. Possibly, the poor future prospects discourage them to actively search for a job. Interpreting the coefficient for the drop in happiness can be problematic if those individuals reporting a drop (gain) in happiness are exactly those who expect (no) difficulties to find a new job. In Panel C interactions between the drop in happiness and the expected difficulties to find a job are added to the model. The absence of a significant effect implies that, given a certain level of expected job finding difficulty, having experienced a drop in happiness does not have any additional effect on search behavior. Hence, the positive effect for the drop in happiness on job search behavior does not seem to be due to a potential correlation with expected job finding opportunities. All in all, our main conclusion from Table 5 is that the drop in happiness seems to affect job search intensity while there does not seem to be an effect on reservation wages. The search intensity effect suggests that unemployed who experience a drop in happiness should find a job more quickly through the increased search intensity. Whether indeed there is such an effect depends on whether

the increase in search intensity materializes in terms of job finding rates.

4.2 Job finding rates

4.2.1 Specification of the likelihood

In this section we investigate how job finding rates are related to the drop in life satisfaction. For the moment we ignore the influence of observed and unobserved characteristics on the job finding rate and assume that the job finding rate $\theta(t)$ depends only on the elapsed duration of unemployment t. We define the conditional density function of the completed unemployment durations as $g(t) = \theta(t) \exp(-\int_0^t \theta(s)ds)$, with the accompanying survivor function $S(t) = \exp(-\int_0^t \theta(s)ds)$.

For some individuals we know their elapsed duration of unemployment at the time of the survey while for other individuals the elapsed duration of unemployment is unknown. For some individuals we know the month in which they found a job, while for other individuals we only know that they found a job before the next survey or we know that at the time of the next survey they still had not found a job. We define time at the survey as 0, the elapsed duration of unemployment at the time of the survey as t_e and the time between the survey and the time at which the unemployed finds a job, i.e. the residual unemployment duration as t_r. Furthermore, we define the calendar time period between the survey and the previous survey when all unemployed still had a job as $\bar{t}_e$ and the time period between the survey and the next survey as $\bar{t}_r$.

To be able to estimate job finding rates we have to deal with several problems that are related to the nature of the GSOEP data. There are issues of left truncation, left censoring, right censoring and interval censoring. The sample of unemployed workers is drawn at a particular survey date which implies that some unemployed have short elapsed unemployment durations while others were unemployed for quite some time. In the specification of the likelihood we take this stock sampling into account by conditioning on the survival taking into account that all unemployed still have a job at time -$\bar{t}_e$.

We distinguish six combinations of left truncation, left censoring, right censoring and interval censoring with separate contributions to the likelihood.[8]

1. Left truncation, the unemployed found a job at time t_r so that total unemployment

[8] We assume a stationary labor market, i.e. an entry rate into unemployment that is constant over time; see D'Addio and Rosholm (2002) for a nice overview of censoring and truncation mechanisms.

duration is in between t_e+t_r-1 and t_e+t_r months: $\frac{S(t_e+t_r-1)-S(t_e+t_r)}{\int_0^{\bar{t}e} S(s)ds}$

2. Left censoring, the unemployed found a job at time t_r so that total unemployment duration is in between t_r and $\bar{t}_e$+t_r months: $\frac{S(t_r)-S(t_r+\bar{t}_e)}{\int_0^{\bar{t}e} S(u|s)ds}$
3. Left truncation while the unemployed found a job before the next survey but with unknown residual duration: $\frac{S(t_e)-S(t_e+\bar{t}_r)}{\int_0^{\bar{t}e} S(s)ds}$
4. Left censoring while the unemployed found a job before the next survey but with unknown residual duration: $\frac{S(\bar{t}_r)-S(\bar{t}_r+\bar{t}_e)}{\int_0^{\bar{t}e} S(s)ds}$
5. Left truncation while the unemployed still had not found a job at the next survey: $\frac{S(t_e+\bar{t}_r)}{\int_0^{\bar{t}e} S(s)ds}$
6. Left censoring while the unemployed still had not found a job at the next survey: $\frac{S(\bar{t}_r)-S(\bar{t}_r)}{\int_0^{\bar{t}e} S(s)ds}$

4.2.2 Specification of the job finding rate

Job finding rates are analyzed using a mixed proportional hazard framework. Differences between individuals in job finding rates are assumed to be related to observed characteristics including the drop in life satisfaction and the elapsed unemployment duration. The job finding rate, at duration t conditional on observed characteristics x and unobserved characteristics u, is specified as

$$\theta(t \mid x, u, \Delta ls) = \lambda(t) \exp(x'\beta + \delta I(\Delta ls < 0) + u) \tag{1}$$

where the I represent an indicator function that has the value of 1 if $\Delta ls < 0$ and a value of zero otherwise, where Δls represents the change in life satisfaction. Furthermore, $\lambda(t)$ represents individual duration dependence, β represents a vector of parameters and δ is the main parameter of interest. We model flexible duration dependence by using a step function:

$$\lambda(t) = \exp(\Sigma_k \lambda_k I_k(t)) \tag{2}$$

where k (= 1,..,5) is a subscript for duration interval and $I_k(t)$ are time-varying dummy variables that are one in subsequent duration intervals. We distinguish quarterly duration

intervals over the first year of unemployment and the aggregate category 12+ months. Because we also estimate a constant term, we normalize $\lambda_1 = 0$.

We assume that the random effects u come from a discrete distribution G with two points of support (u_1, u_2), related to two groups of individuals. The first group has a high job finding rate, the other has a low job finding rate. The associated probabilities are denoted as follows: $\Pr(u = u_1) = p_1$, $\Pr(u = u_2 - u_1) = p_2$. Here p_j $(j = 1, 2)$ is assumed to have a logit specification: $p_j = \frac{\exp(\alpha_j)}{\Sigma_j \exp(\alpha_j)}$ and the normalization is $\alpha_2 = 0$.

Calculating the change in life satisfaction implies that unobserved fixed effects are removed. Even if there is a correlation between time-invariant unobservables affecting life satisfaction and unobservables affecting job finding rates this correlation can be ignored. We consider the change in life satisfaction when individuals become unemployed as exogenous to the job finding rate.

4.2.3 Parameter estimates

Panel A of Table 6 shows the baseline parameter estimates. From the first column it is clear that for men a drop in life satisfaction has an insignificant effect on the job finding rate. Furthermore, age has a negative effect, while household income, UI entitlement and being married have a positive effect on the job finding rate. The number of children of the unemployed workers does not affect the job finding rate. Finally, the first column of Panel A shows clear presence of unobserved heterogeneity. Conditional on elapsed duration and observed characteristics there are two groups of unemployed of that are different in job finding rates. The larger group representing about 55% has a substantial lower job finding rate than the other group of unemployed men. The second column shows the parameter estimates for females. Most of the parameter estimates are very similar to those of men with one exception. Whereas married men have a higher job finding rate than unmarried men, this is opposite for women. Married women have a smaller job finding rate than unmarried women. Also the distribution of unobserved heterogeneity is somewhat different. For women the group with a low job finding rate is substantially larger. About one-third of women have a high job finding rate while two-thirds have a substantially lower job finding rate.

To test the robustness of our main findings we performed a number of sensitivity analyses of which the results are reported in panels B to F of Table 6.

Although there is a correlation between expectations concerning the difficulty to find a job and the drop in life satisfaction it is not the case that the two are perfectly correlated. In panel B we add expectations regarding the difficulty of finding a new job as additional explanatory variables. Workers who think that it is extremely difficult to find a job have a lower job finding rate while those who expect it to be easy have a higher job finding rate. The latter is remarkable as the probability of active search is below average, which indicates that there is only an indirect relationship between search activity and job finding. However, the effect of the drop in happiness on the job finding rate is not affected. Also interaction terms between the drop in happiness and expected difficulties in finding a job do not have a significant effect on the job finding rates. Conditional on the perception of the difficulty to find a job, the drop in life satisfaction has no effect on job finding.

In panel C we investigate whether alternative specifications of the change in life satisfaction generate different results. In panel $C1$ we use the full range of the change in life satisfaction as one of the explanatory variables. In panel $C2$ we include the change in life satisfaction with a truncation at both ends of -2 and +2. In panel $C3$ we use two dummy variables for the drop in life satisfaction. One is a dummy variable for a drop of one to two units, the other dummy variable is for a drop in life satisfaction of more than two units. In all cases the relevant parameter estimates do not change.

In the estimates presented in panel D of Table 6 we included job satisfaction in the pre-unemployment job as additional explanatory variable, since pre-unemployment job satisfaction has shown to be strongly correlated with whether or not one experienced a drop in life satisfaction (Table 4). Including job satisfaction hardly affects the parameter estimates for the change in life satisfaction.

In the last two panels of Table 6 we investigate the importance of our model specification. Panel E shows that for women it is important to account for potential unobserved heterogeneity. If we ignore this and use a proportional hazard specification we find that the drop in life satisfaction has a significant positive effect on the job finding rate. Panel F shows that the positive effect of the drop in life satisfaction on the job finding rate is also found if we pool the data for men and women. The findings in panels E and F may also explain why Clark (2003) and Mavridis (2010) find positive effects of the drop in mental well-being on the job finding rates. In both studies the authors do not allow the job finding rate to be influenced by unobserved heterogeneity. In addition to that Mavridis (2010)

pools data for men and women. Of course the differences in findings may also have to do with the difference in measures of well-being – self-reported life satisfaction rather than a measure for mental well-being, GHQ-12.

In a final sensitivity check we have replaced pre-unemployment life satisfaction with lagged life satisfaction (i.e. happiness in the *before last* year of employment). This accounts for the possibility that life satisfaction measured shortly before an individual becomes unemployed is biased because of anticipation of the change in labor market status (cf. "Ashenfelter dip", Ashenfelter (1978)). In this sensitivity analysis the number of observations drops somewhat because not for every unemployed worker the lagged pre-unemployment life satisfaction is available. Based on a sample of 1529 males we find an insignificant effect of the drop in life satisfaction on the job finding rate 0.08 (t=0.1); for women (N= 1269) we find 0.20 (t=1.6) (results are not presented in the Table). From this we conclude that potential measurement errors because of anticipation of a change in labor market status do not influence our main findings.

All in all, the results do not show that the change in life satisfaction upon entering unemployment affects the job finding rates of unemployed individuals.

5 Quality of post-unemployment jobs and post-unemployment life

Although changes in life satisfaction do not affect job finding rates, they might affect the quality of post-unemployment matches. The effect on the quality of the post-employment job match is likely to be negative. A drop in life satisfaction may lower the reservation wage leading to a post-unemployment wage loss. At first sight there is no evidence for this because individuals do not indicate doing this (see Table 5). However, what individuals say and do is not necessarily the same. In addition, unhappiness may give rise to poor job search, i.e. individuals may be more concerned about finding a job than about the quality of this new job, which may result in poor matching efficiency. This section investigates how the change in happiness affects the quality of the post-unemployment job. We use three indicators for this. First, we compare hourly wages in the pre- and post-unemployment job, investigating whether they decreased or increased. Second, we compare job satisfaction in the pre- and post-unemployment job. In addition to a wage effect the post-unemployment

job may be less attractive in terms of disamenities, the type of work, travel distance etcetera. Finally, we compare pre- and post-unemployment life satisfaction. The new job may be okay but there might still be a psychological scar from previous job loss and being unemployed for a while.

Table 7 gives an impression of the change in the pre- and post-unemployment life satisfaction, job satisfaction and wage. Panel A shows that there are some differences in life satisfaction for those who found a new job. It seems that people who experienced a drop in happiness upon entering unemployment are more likely to be less satisfied with their lives once re-employed. This points to incomplete habituation, where previous unemployment experiences have permanent negative effects on individual well-being (e.g. Clark et al. (2001); Lucas et al. (2004); Clark, 2006; Clark et al. (2008)). Panel B shows that, in general, once in a new job people are more likely to rate this new job better than their previous job, but this is unrelated to the experienced change in life satisfaction at the time of becoming unemployed. From Panel C it appears that people who experienced a drop in happiness when entering unemployment are equally likely to obtain a wage increase after re-employment as people who did not experience such a drop in happiness.

To investigate the effect of the drop in life satisfaction when becoming unemployed on the post-unemployment life satisfaction and job quality we estimate linear probability models. Table 8 presents parameter estimates explaining the probability that there is a decrease in life satisfaction, job satisfaction or wage compared to the pre-unemployment situation. These parameter estimates confirm that there are no effects on post unemployment job quality, but that a drop in life satisfaction upon becoming unemployed does have permanent effects on life satisfaction later in life, even after re-employment.

The finding that post-unemployment job quality is unaffected by the drop in happiness is in line with the finding that the drop in happiness does not influence the job finding rate. Apparently, the drop in happiness has no effect on the job finding rate and no effect on the quality of post-unemployment jobs.

6 How to explain our findings?

How can we interpret our findings? Why does the drop in happiness not provide sufficient incentives to unemployed workers to find a job more quickly? This is particularly intriguing as the drop in happiness does seem to have a positive effect on job search activities.

However, it is also clear from our analysis that there is not a one-to-one relationship between job search activities and job finding. For example, workers who indicate that they think it is easy to find a job combine a lower search activity with a higher job finding rate.

The job finding rate is the product of the job offer arrival rate, which is a function of search intensity, and the acceptance probability, which is a function of the reservation wage. We find that unhappiness does not affect the reservation wage so all the action should be in the job offer arrival rate.

In terms of the effect of unhappiness on job search there are two possibilities. It could be that the active search reported is inadequate perhaps because of a lack in availability of vacant jobs. Then, the relationship between search intensity and job offer arrival rate is weak or absent and an increase in search intensity does not affect the job finding rate. Unhappy unemployed search harder but in vain.

An alternative explanation is that the reported active job search is just a matter of perception. Workers who experienced a drop in life satisfaction think they should should search actively for a job. Thus they report doing so but in reality they do not change their search behavior because that in itself generates dissatisfaction. And there might be a difference in dissatisfaction related to being unemployed and dissatisfaction related to active job search. Knabe et al. (2010) argue that there is a difference between life satisfaction measured as a general feeling and momentary satisfaction related to specific activities. Employed workers are more satisfied with their life and with various specific activities than unemployed workers. Nevertheless, since unemployed workers have more time to spend on activities that generate a higher satisfaction when weighting over all activities there is no difference in total life satisfaction. On the one hand, individuals are unhappy because they are unemployed, but on the other hand they are happy to spend their time in more satisfactory activities. According to Knabe et al. (2010), when considering life satisfaction individuals have a different reference framework than when they consider specific activities. Unemployed consider being employed as a desirable state but they do not value the activities which would speed up the transition to this state sufficiently. Job search is among the activities which are not a very popular. So, there may be an increase but this is insufficient to leave the state of unemployment quickly.

7 Conclusions

When workers become unemployed on average their happiness drops substantially. This drop in happiness goes beyond the loss of income that most individuals experience when they become unemployed. This is a common finding in many studies. Another common finding in the literature is that unemployed find a job more quickly once they are stimulated to do so either through labor market activation programs or through the threat or imposition of benefit sanctions.

These two empirical findings are puzzling. If unemployed experience a drop in happiness why are activation programs still needed to bring the unemployed back to work more quickly? In this paper we address this puzzle. One important finding of our paper is that there is no drop in happiness across the board but there is substantial variation in the change in life satisfaction across individuals. In fact, half of the unemployed do not become unhappy while in unemployment; this mostly concerns people who were unhappy with their job, people who have sufficient alternative household income sources, or those who had a previous unemployment spell.

The fact that not for every unemployed worker there is a drop in happiness explains why at least some workers would need to be activated. However, our findings go beyond that. We find that even workers who experience a substantial drop in happiness have no higher job finding rate, despite the fact that they do report to search more actively for a job. This finding is confirmed when studying the effects of the drop in happiness on the quality of the post-unemployment job. Neither the post-unemployment wage nor the post-unemployment job quality is affected by the drop in happiness. Apparently, the drop in happiness when becoming unemployed does not affect future labor market outcomes of unemployed workers. We do however find a scarring effect. For unemployed who experienced a drop in life satisfaction finding a job does not lead to full recovery of life satisfaction.

A puzzling finding in our study is that while unhappiness does not affect job finding it seems to increase search activities. This could be for two reasons. The first is that the job finding process is mainly driven by the availability of job vacancies so that an increase in search intensity does not lead to more job offers. Alternatively, the lack of influence of the drop in happiness on job finding may have to do with the difference between momentary satisfaction related to certain activities and the general feeling as

indicated by life satisfaction. Whatever the reason may be, our paper clearly shows that even unemployed workers who became unhappy when losing their job do not exert sufficient additional effort to find a job quickly. In this respect there is no contradiction between unemployed being unhappy and the need for activation policies to stimulate unemployed to find a job more quickly. The fact that a drop in happiness does not affect job finding is not a justification for the imposition of benefit sanctions or other activation policies. These should be justified on the grounds of inadequate or insufficient job search activities in the face of the availability of sufficient job vacancies.

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Table 1: Parameter estimates life satisfaction

	Males	**Females**
Unemployed (dummy; 1=yes)	−1.06 (20.1)∗∗	−0.84 (14.9)∗∗
Married (dummy; 1=yes)	0.10 (1.0)	−0.13 (1.3)
Kids (dummy; 1=yes)	0.03 (0.4)	−0.01 (0.1)
Household income (log)	0.61 (8.4)∗∗	0.45 (5.6)∗∗
Year dummies	yes	yes
-Loglikelihood	5173.06	4124.87
Individuals	1636	1354
Observations	11418	8959

Note: The dependent variable is self-reported life satisfaction, which is estimated in a fixed effects ordered logit model. Coefficients for year dummies are not presented. Absolute t-statistics in parentheses; a ** (*) indicates that the coefficient is different from zero at a 5% (10%) level of significance.

Table 2: Parameter estimates for job loss probability

	Males	Females
Life satisfaction	-0.04 (1.4)	-0.02 (0.8)
Job satisfaction	-0.14 (7.4)**	-0.18 (8.6)**
Individuals	10324	820
Observations	6656	4876

Note: Other explanatory variables include tenure, log working hours, log of hourly wage, dummies for the presence of kids, age groups (19-24, 25-34, 35-44, 45-54), educational and vocational attainment, and marital status; absolute t-statistics in parentheses; a ** (*) indicates that the coefficient is different from zero at a 5% (10%) level of significance.

Table 3: Parameter estimates for life satisfaction when unemployed

	Males	**Females**	Model
Elapsed duration in unemployment	-0.03 (2.9)**	-0.02 (1.3)	Ordered logit
	-0.00 (0.1)	0.000 (1.1)	FE Ordered logit
Observations	1636	1354	

Note: Each row represents a separate estimation. The fixed effects (FE) analyses are only done for those individuals that we observe in unemployment in two consecutive waves. Other explanatory variables include age dummies, a dummy for the presence of kids and UI entitlement, educational and vocational attainment, marital status, the (change in) log of household income and job satisfaction while employed (not in fixed effects (FE) analyses); absolute t-statistics in parentheses; a ** (*) indicates that the coefficient is different from zero at a 5% (10%) level of significance.

Table 4: Parameter estimates for life satisfaction among workers who became unemployed

	Males			Females		
	Employed	Unemployed	Change	Employed	Unemployed	Change
A. Baseline model						
Job satisfaction (t-1)	0.37 (16.8)**	0.15 (7.7)**	−0.12 (6.3)**	0.29 (13.5)**	0.12 (6.2)**	−0.12 (5.8)**
Age 25-34	−0.31 (1.8)*	−0.09 (0.5)	−0.01 (0.1)	−0.22 (1.1)	−0.00 (0.0)	0.13 (0.6)
Age 35-44	−0.91 (4.9)**	−0.46 (2.5)**	0.06 (0.7)	−0.65 (3.1)**	−0.57 (2.7)**	0.05 (0.3)
Age 45-54	−1.11 (5.6)**	−0.67 (3.4)**	0.03 (0.9)	−0.68 (3.3)**	−0.72 (3.5)**	−0.18 (0.9)
Married	0.43 (3.8)**	0.11 (1.0)	−0.16 (1.4)	0.14 (1.2)	0.16 (1.4)	0.01 (0.1)
Kids	−0.08 (0.8)	−0.12 (1.1)	−0.04 (0.3)	−0.09 (0.9)	−0.01 (0.1)	0.03 (0.3)
UI entitled		−0.03 (0.3)	−0.11 (1.1)		−0.14 (1.3)	−0.06 (0.6)
H.h. income (log)	0.78 (7.0)**	0.70 (7.8)**		0.70 (6.0)**	0.74 (7.1)**	
Δ h.h. income (log)			0.51 (4.1)**			0.50 (3.9)**
Educational qual.	yes	yes	yes	yes	yes	yes
Vocational qual.	yes	yes	yes	yes	yes	yes
Year dummies	yes	yes	yes	yes	yes	yes
B. Extended model						
Job satisfaction (t-1)	0.39 (15.8)**	0.13 (5.8)**	−0.16 (7.0)**	0.30 (12.7)**	0.12 (5.3)**	−0.13 (5.3)**
H.h. income (log)	0.67 (5.5)**	0.65 (6.1)**		0.76 (5.7)**	0.79 (6.5)**	
Δ h.h. income (log)			0.49 (4.0)**			0.61 (4.0)**
Difficulty to find job						
- Extremely difficult		−0.68 (4.4)**	−0.28 (1.7)*		−0.16 (1.1)	0.09 (0.6)
- Easy		0.75 (4.1)**	0.64 (3.5)**		0.99 (4.0)**	0.68 (2.7)**
Repeated U (1=yes)	−0.42 (3.8)**	0.00 (0.0)	0.34 (3.0)**	−0.09 (0.7)	0.13 (1.0)	0.04 (0.3)
Firm closure (1=yes)	−0.14 (0.9)	−0.23 (1.5)	−0.14 (0.8)	−0.07 (0.1)	−0.04 (0.3)	−0.08 (0.5)
Educational qual.	yes	yes	yes	yes	yes	yes
Vocational qual.	yes	yes	yes	yes	yes	yes
Year dummies	yes	yes	yes	yes	yes	yes

Note: Samples of 1636 males and 1354 females; Ordered Logit model; Repeated U refers to a dummy for having a repeated unemployment spell (yes=1). The parameter estimates for educational (4 dummies) and vocational attainment (3 dummies), year of entrance (12 dummies), and the auxiliary parameters are not reported; absolute t-statistics in parentheses; a ** (*) indicates that the coefficient is different from zero at a 5% (10%) level of significance. Job loss refers to job loss due to firm closure.

Table 5: Parameter estimates job search behavior

	Males		**Females**	
	Probit Active job search	OLS Log res. wage	Probit Active job search	OLS Log res. wage
A.				
Δ ls < 0	0.26 (3.7)**	−0.02 (1.1)	0.31 (3.9)**	0.04 (1.4)
Age 25-34	−0.10 (0.7)	0.14 (3.6)	−0.32 (1.9)*	0.11 (2.2)**
Age 35-44	−0.22 (1.5)	0.16 (3.8)	−0.13 (0.7)	0.12 (2.4)**
Age 45-54	−0.14 (0.9)	0.10 (2.3)	−0.06 (0.4)	0.10 (1.9)*
Married	0.01 (0.1)	0.06 (2.2)	−0.13 (1.4)	−0.16 (5.7)**
Kids	0.09 (1.1)	0.01 (0.6)	0.07 (0.7)	−0.10 (3.5)**
UI entitled	−0.10 (1.2)	−0.02 (0.9)	0.19 (2.1)	0.01 (0.3)
Log household inc.	−0.05 (0.09)	0.16 (6.4)**	0.04 (0.10)	0.06 (2.1)**
N	1507	1023	1170	683
B.				
Δ ls < 0	0.24 (3.3)**	−0.02 (1.0)	0.31 (3.7)**	0.04 (1.5)
Difficulty to find job				
- Extremely difficult	−0.33 (3.1)**	0.05 (1.6)	−0.14 (1.3)	−0.04 (1.3)
- Easy	−0.81 (7.0)**	0.11 (3.3)**	−0.40 (2.3)**	0.05 (0.9)
N	1505	1022	1169	683
C.				
Δ ls < 0	0.27 (3.2)**	−0.01 (0.6)	0.33 (3.5)**	0.03 (1.2)
Difficulty to find job				
- Extremely difficult	−0.23 (1.5)	0.08 (1.7)*	0.01 (0.1)	−0.04 (0.9)
- Easy	−0.79 (5.1)**	0.11 (2.3)**	−0.60 (2.7)**	0.03 (0.4)
Δ ls $< 0 \cdot$ Extremely difficult	−0.17 (0.8)	−0.05 (0.9)	−0.30 (1.4)	0.00 (0.1)
Δ ls $< 0 \cdot$ Easy	−0.03 (0.1)	0.02 (0.2)	0.51 (1.5)	0.05 (0.5)
N	1505	1022	1169	683

Note: The parameter estimates for year of entrance dummies (12), educational and vocational attainment, and the constants are not reported. Panel B: The parameter estimates for age, marital status, kids, UI entitlement, log household income, year of entrance dummies (12), educational and vocational attainment, and the constants are not reported. Absolute t-statistics in parentheses; a ** (*) indicates that the coefficient is different from zero at a 5% (10%) level of significance.

Table 6: Parameter estimates job finding rate

	Males	**Females**
A. Baseline		
Δ ls < 0	0.08 (0.9)	0.03 (0.2)
Age 25-34	-0.31 (2.0)**	-0.96 (3.6)**
Age 35-44	-0.77 (4.3)**	-1.07 (3.9)**
Age 45-54	-1.38 (6.2)**	-1.49 (5.5)**
Household income	0.27 (3.0)**	0.37 (2.9)**
Married	0.25 (2.2)**	-0.40 (2.7)**
Kids	-0.06 (0.6)	-0.08 (0.8)
UI entitled	0.27 (2.6)**	0.27 (2.0)**
α_1	-0.22 (1.0)	-0.74 (3.8)**
$u_2 - u_1$	-1.86 (10.0)**	-2.46 (10.3)**
-Loglikelihood	7326.4	5865.5
B. Including difficulty to find job		
Δ ls < 0	0.07 (0.7)	0.04 (0.3)
Extremely difficult to find job	-1.15 (4.1)**	-0.53 (2.4)**
Easy to find job	0.50 (2.7)**	1.21 (3.6)**
Δ ls $< 0 \cdot$ Extremely difficult to find job	0.26 (0.8)	0.14 (0.4)
Δ ls $< 0 \cdot$ Easy to find job	-0.04 (0.1)	-0.03 (0.1)
-Loglikelihood	7298.4	5850.2
C. Alternative specifications change in life satisfaction		
1. Δ ls	0.01 (0.3)	0.00 (0.0)
-Loglikelihood	7326.7	5865.6
2. Δ ls$_{capped}$	0.01 (0.3)	-0.00 (0.1)
-Loglikelihood	7326.7	5865.6
3. $-2 \leq \Delta$ ls < 0	0.15 (1.5)	0.06 (0.4)
Δ ls < -2	-0.06 (0.4)	-0.03 (0.2)
-Loglikelihood	7325.1	5865.4
D. Including job satisfaction		
Δ ls < 0	0.06 (0.6)	0.03 (0.3)
Job satisfaction	0.02 (1.1)	0.06 (2.6)**
-Loglikelihood	7325.7	5862.4
E. Ignoring unobserved heterogeneity		
Δ ls < 0	0.04 (0.8)	0.15 (2.2)**
-Loglikelihood	7333.3	5880.8
F. Pooling - no unobserved heterogeneity		
Δ ls < 0	0.09 (2.1)**	
Female	-0.43 (9.3)**	
-Loglikelihood	13243.0	
Observations	1636	1354

Note: Results are from a mixed proportional hazards model; Δ ls < 0 is a dummy for having experienced a reduction in happiness upon entering unemployment; the parameter estimates for educational and vocational attainment (5 dummies), year of entrance (12 dummies), duration dependence (4 parameters) and the constants are not reported; absolute t-statistics in parentheses; a ** (*) indicates that the coefficient is different from zero at a 5% (10%) level of significance.

Table 7: Quality of post-unemployment jobs

	Males			**Females**		
	Δ ls			**Δ ls**		
	< 0	≥ 0	Total	< 0	≥ 0	Total
A. Life satisfaction						
Δ LSE < 0	34	14	25	28	8	18
Δ LSE ≥ 0	31	49	39	27	41	34
Still unemployed	35	37	36	45	50	48
Total	100	100	100	100	100	100
B. Job satisfaction						
Δ JS < 0	23	21	22	19	15	17
Δ JS ≥ 0	42	42	42	35	34	35
Still unemployed	35	37	36	46	51	48
Total	100	100	100	100	100	100
C. Hourly wages						
Δ wage < 0	35	32	34	28	25	26
Δ wage ≥ 0	26	27	26	25	24	25
Still unemployed	39	41	40	47	51	49
Total	100	100	100	100	100	100
Observations	882	754	1636	679	675	1354

Note: Still unemployed also include missing observations on Δ LSE, Δ JS or Δ wage

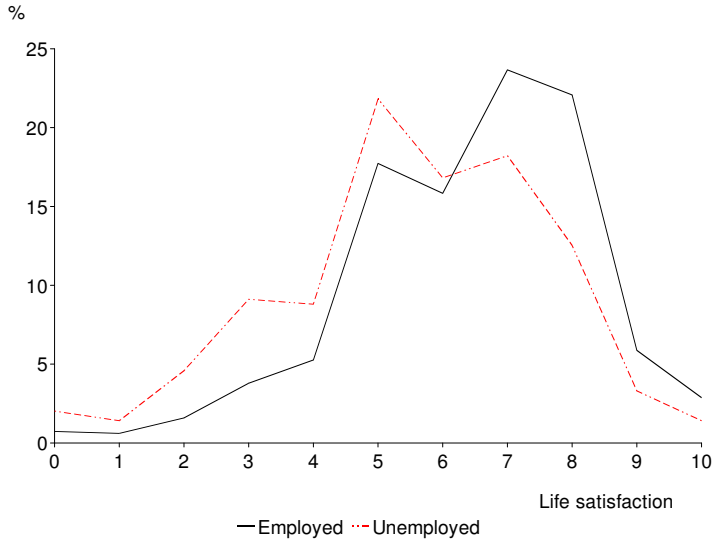
Table 8: Parameter estimates linear probability models

	Probability of decrease in		
	Life satisfaction	**Job satisfaction**	**Hourly Wages**
A. Males			
Δ ls < 0	0.29 (10.2)**	−0.02 (0.6)	−0.02 (0.7)
Age 25-34	−0.01 (0.1)	0.02 (0.4)	−0.00 (0.0)
Age 35-44	−0.05 (0.9)	0.06 (0.9)	0.12 (1.9)*
Age 45-54	−0.12 (1.9)*	0.03 (0.4)	0.09 (1.4)
Household income	0.06 (1.8)*	0.03 (0.7)	0.09 (2.4)**
Married	0.08 (2.1)**	−0.03 (0.7)	0.00 (0.1)
Kids	−0.04 (1.2)	−0.00 (0.1)	−0.06 (1.7)*
UI entitled	−0.03 (0.9)	−0.03 (0.8)	0.02 (0.6)
R^2	0.14	0.03	0.05
Observations	1050	1047	996
B. Females			
Δ ls < 0	0.34 (10.0)**	−0.03 (0.9)	0.00 (0.0)
Age 25-34	0.03 (0.5)	−0.01 (0.1)	0.13 (1.7)*
Age 35-44	0.09 (1.2)	0.08 (1.1)	0.11 (1.4)
Age 45-54	0.01 (0.2)	0.12 (1.6)	0.20 (2.5)**
Household income	0.03 (0.6)	0.10 (2.4)**	0.16 (3.4)**
Married	0.01 (0.3)	−0.08 (1.9)*	−0.03 (0.5)
Kids	−0.05 (1.4)	0.04 (1.0)	0.00 (0.0)
UI entitled	0.03 (0.9)	0.01 (0.3)	0.03 (0.6)
R^2	0.12	0.04	0.06
Observations	706	703	677

Note: see footnote Table 6.

Figure 1: Distribution life satisfaction of unemployed workers; when employed and unemployed

a. Males



b. Females

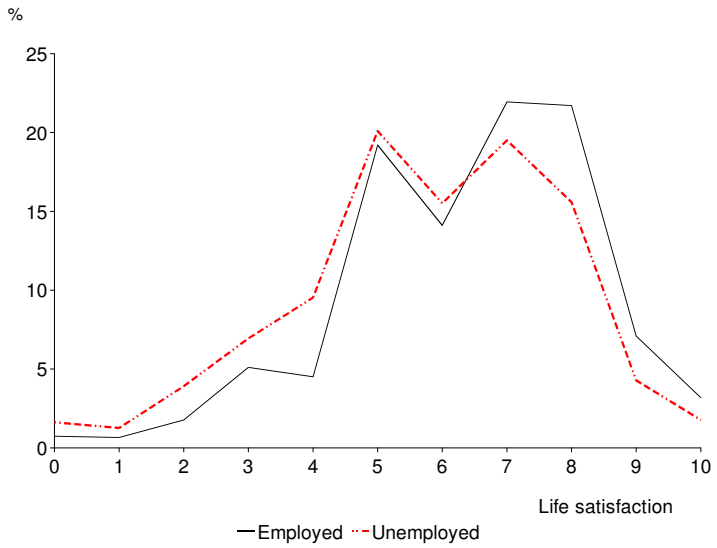
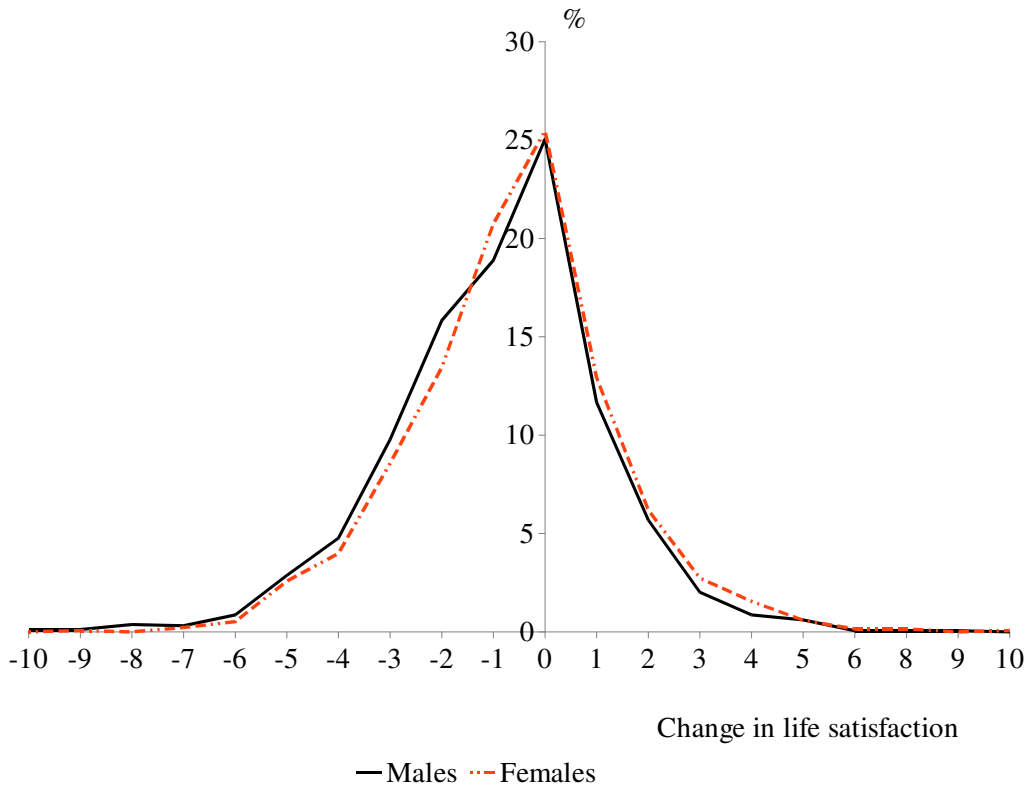


Figure 2: Distribution of the drop in life satisfaction upon entering unemployment



Appendix: Details about the GSOEP data

A1. Unemployment duration

When someone is observed to transit from employment in the first year to unemployment in the following year, the start and end date of the unemployment spell is obtained from the calendar information, which contains retrospective occupational information on a monthly basis. We can distinguish 8 different types of unemployment spells, for which we calculate the unemployment duration follows:

1. For those who have a job one interview later (*t+1*) we take the unemployment duration as the difference between the interview date at which the individual was first observed in unemployment (t) and the actual end date of the unemployment spell;

2. For those who left unemployment after having found a job, but lost this job again (and are now inactive) before the next interview date (*t+1*), we take the unemployment duration as the difference between the interview date at which the individual was first observed in unemployment (t) and the actual end date of the unemployment spell;

3. For those who left unemployment to become inactive until the next interview date (*t+1*) and are missing the year after (*t+2*), we take the unemployment duration as the difference between the interview date at which the individual was first observed in unemployment (t) and the interview date one year later (*t+1*). This is a censored spell since we do not observe a re-entry to employment;

4. For those who are still in unemployment two years later (*t+2*), we take the unemployment duration as the difference between the interview date at which the individual was first observed in unemployment (t) and the interview date two years later (*t+2*). This is a censored spell;

5. For those who are still unemployed one year later (or otherwise inactive) but found a job two years later (*t+2*), we take the unemployment duration as the difference between the interview date at which the individual was first observed in unemployment (t) and the actual end date of the unemployment spell;

6. For those who are still unemployed one year later and inactive the year after (*t+2*) but left unemployment for a job (between *t+1* and *t+2*), we take the unemployment duration as the difference between the interview date at which the individual was first observed in unemployment (t) and the actual end date of the unemployment spell;

7. For those who are still unemployed one year later and inactive the year after (*t+2*), we take the unemployment duration as the difference between the interview date at which the individual was first observed in unemployment (t) and the interview date two years later (*t+2*);

8. For those who are still unemployed one year later and missing the year after (*t+2*), we take the unemployment duration as the difference between the interview date at which the individual was first observed in unemployment (t) and the interview date one year later (*t+1*).

A2. Means of variables

Table A1: Means of variables

	Mean	Std. Dev.	Min	Max	N
a. Males					
Unemployment duration (months)	15.9	10.0	0	39	1396
Year	2000.2	3.7	1994	2006	1636
Life satisfaction while employed (t-1)	6.4	1.8	0	10	1636
Life satisfaction while unemployed (t)	5.5	2.1	0	10	1636
Life satisfaction while re-employed (t+1)	6.4	1.7	0	10	790
Life satisfaction while still unemployed (t+1)	5.3	2.0	0	10	844
Job satisfaction (t-1)	6.3	2.3	0	10	1636
New job one year later (t+1) (0 = no, 1 = yes)	0.8	0.7	0	2	1636
Age 19-24	0.1	0.3	0	1	1636
Age 25 - 34	0.3	0.5	0	1	1636
Age 35 - 44	0.3	0.5	0	1	1636
Age 45 - 54	0.3	0.4	0	1	1636
Married (0 = no, 1 = yes)	0.6	0.5	0	1	1636
Kids	0.5	0.5	0	1	1636
Educational attainment	1.6	0.8	0	3	1636
Vocational attainment	1.0	0.5	0	2	1636
UI entitled (0 = no, 1 = yes)	0.5	0.5	0	1	1636
Monthly net household income (2005 euros)	1848.5	972.7	29.7	13000.0	1636
Gross hourly wage (t-1) (2005 euros)	10.7	6.0	0	109.5	1568
Expected difficulty of finding job	2.0	0.5	1	3	1527
Active job search	0.7	0.4	0	1	1507
Reservation wage	1395.4	542.4	10.8	6600.0	1023
b. Females					
Unemployment duration (months)	18.9	9.9	0	42	1170
Year	1999.9	3.8	1994	2006	1354
Life satisfaction while employed (t-1)	6.4	1.9	0	10	1354
Life satisfaction while unemployed (t)	5.8	2.0	0	10	1354
Life satisfaction while re-employed (t+1)	6.6	1.8	0	10	527
Life satisfaction while still unemployed (t+1)	5.8	2.1	0	10	822
Job satisfaction (t-1)	6.1	2.5	0	10	1354
New job one year later (t+1) (0 = no, 1 = yes)	0.6	0.7	0	2	1354
Age 19-24	0.1	0.3	0	1	1354
Age 25 - 34	0.3	0.5	0	1	1354
Age 35 - 44	0.3	0.5	0	1	1354
Age 45 - 54	0.3	0.5	0	1	1354
Married (0 = no, 1 = yes)	0.6	0.5	0	1	1354
Kids	0.5	0.5	0	1	1354
Educational attainment	1.8	0.8	0	3	1354
Vocational attainment	1.0	0.5	0	2	1354
UI entitled (0 = no, 1 = yes)	0.7	0.4	0	1	1354
Monthly net household income (2005 euros)	1959.0	1052.2	289.4	11157.6	1354
Gross hourly wage (t-1) (2005 euros)	9.3	5.3	0	98.4	1317
Expected difficulty of finding job	1.879599	0.4670411	1	3	1196
Active job search	0.7	0.4	0	1	1170
Reservation wage	1056.5	362.9	298.7	2704.5	683