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Experienced Well-Being and Labor Market Status: The Role of Pleasure and Meaning

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Abstract

This paper examines experienced well-being of employed and unemployed workers. We use the survey-adapted day reconstruction method (DRM) of the Innovation Sample of the German Socio-Economic Panel Study (SOEP-IS) to analyze the role of the employment status for well-being, incorporating complete time use. Summarizing the average share of pleasurable minutes, we generate the P-index. We show that - in contrast to evaluative life satisfaction - the average unemployed experiences more pleasurable minutes due to the absence of working episodes. Hence, we examine working episodes in depth. While working is among the activities with the highest propensities for an unpleasant experience, it is also among the most meaningful activities. We show that meaning is a central non-monetary determinant for a pleasurable work episode and find that pleasure during work and job satisfaction in general have the same association with meaning.

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1. Introduction

Subjective well-being (SWB) is a multidimensional concept that encompasses evaluative and experiential measures. While evaluative well-being measures (e.g. life satisfaction) ask people what they think about their life, experiential measures cover how people experience their life (Stiglitz, Sen, and Fitoussi 2009, Fleurbaey 2009). Both measures of well-being are used to explain the subjective quality of different labor market states. However, the comparisons of being employed and unemployed are mostly accomplished by evaluating *life satisfaction* based on questions that ask individuals how satisfied they are in life in general. The unemployed are detrimentally less satisfied with their life than employed persons (see, for instance, Kassenboehmer and Haisken-DeNew 2009). One domain of life satisfaction is, at least for the employed, job satisfaction. As an evaluative measure, it asks if people are satisfied with their job, thus it is used as an empirical proxy of utility from one's job.[1] However, both evaluative measures are like snapshots in the moment of asking, neglecting that well-being is an enduring process. Here, we focus on the temporal component that is widely ignored when asking for evaluative outcomes. SWB also encompasses experienced well-being that combines well-being valuations over time. Being employed or being unemployed crucially shapes individual time use, such that experienced well-being is particularly important in this context. This study focuses on the process (dis-) amenities from working and its absence for the unemployed.

Empirical experienced well-being is based on the theoretical concept of experienced utility of Kahneman et al. (1997). It works out Bentham's idea that time comes with experiences of pleasure or pain in every instantaneous unit.[2] It is defined as the temporal integral of positive or negative valuations, i.e. time becomes the weighting factor for experiences of pleasure and displeasure (Kahneman et al. 2004a, Krueger et al. 2009b, Diener and Tay 2014). Experienced well-being aggregates such instantaneous experiences into one single measure and enables the comparisons of groups of individuals on an aggregate level (Kahneman et al. 2004b).

This paper uses the day reconstruction method (DRM) module of the nationally representative innovation sample of the German Socio-Economic Panel Study (SOEP-IS), which was included in the annual survey from 2012 to 2015. We examine experienced well-being on labor markets and take standard evaluative SWB measures for life and job satisfaction

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[1] This is validated as it is shown that actual labor market behavior is predicted sufficiently by job satisfaction (see, for instance, Green 2010).

[2] Allocation of time was already introduced into economics in the mid-20th century (see Juster and Stafford 1991 for a literature review).

- as quantities that in general are used to evaluate labor market states – as comparison measures. Namely, we investigate if being employed is valuable in terms of experienced well-being in comparison to being unemployed. Workers experienced well-being is expressed in terms of the P-index, which reports the share of pleasurable minutes a person experiences on the DRM day.

Two potential sources of (dis-)amenities from work beyond the monetary remuneration are examined: experiences of pleasure and experiences of meaning during working. The latter – meaning, a feeling that an activity has a deeper sense, – specifically needs more investigation. We hypothesize that working becomes a pleasurable activity due to the meaningful production it enables. A review suggests that workers strive for such experiences of meaning during work (Cassar and Meier 2018). Methodologically, we shift the perspective from the outcome of experienced well-being for the whole day to examining only working episodes. We also ask if working becomes pleasurable because it provides a meaningful experience, further examining how pleasure and a meaningful experience affect experienced well-being and job satisfaction.

We contribute to the literature by comparing experienced well-being of the employed and the unemployed by accounting for unobserved individuals' heterogeneity with individual fixed effects. Representative SOEP-IS also allows for strengthening the external validity compared to prevailing experimental populations. Both aspects allow methodological progress to understand how workers experience both states. By integrating experienced meaning as a predictor for pleasure during work, we asses a central non-monetary determinant for utility from work. We find that, in contrast to income and working hours, perceiving meaningfulness enhances instantaneous pleasure at work. Consequently, total experienced well-being is increased by meaning. Nonetheless, on average, the unemployed experience more pleasurable time, which is mainly due to the absence of the working episodes in their daily life.

The rest of the article is organized as follows. Section 2 reviews the related literature and Section 3 describes the SOEP-IS DRM data. In Section 4, we describe the methodological aspects of experienced well-being and pleasure from job meaning. The results for experienced well-being are presented in Section 5, while Section 6 reports the findings regarding pleasure and well-being from experienced meaning. Finally, in Section 7, we sum up the findings and discuss implications.

2. Related Literature

Beyond the shrinking financial abilities from a job loss, unemployment reduces *life satisfaction* (e.g. Winkelmann and Winkelmann 1998; Kassenboehmer and Haisken-DeNew 2009). This

reduction is explained by a loss of non-pecuniary benefits from employment (e.g. Clark 2003; Schöb 2013; Hetschko et al. 2014). Obviously, the daily routine of employed and unemployed individuals differs fundamentally. The unemployed have more time discretion without the obligation to work. Measures of experienced well-being incorporate the valuation of elapsed time and allow us to incorporate it into labor market analysis. The few papers contrasting employment and unemployment by using experienced well-being measures arrive at ambiguous findings (Knabe et al. 2010, Krueger and Mueller 2012, Tadic et al. 2013, Flèche and Smith 2017, An Hoang and Knabe 2019).

In two female-only samples from Rennes (France) and Columbus (USA), the unemployed have lower experienced well-being (Krueger et al. 2009a). In contrast, results of a sample from Berlin and Magdeburg (Germany) show that the well-being of the unemployed does not significantly differ from that of the employed (Knabe et al. 2010). Krueger and Mueller (2012) examine reemployment of unemployed in New Jersey (USA), specifically tracking the emotions of happiness, sadness and stress. They find that reemployment increases the intensity of happiness while reducing stress and sadness. Surveying the frequencies of happiness, anxiousness, and sadness of the unemployed during a retrospective four-week window shows a comparable pattern for the unemployed in Germany. They report more frequent feelings of sadness and anxiety, and less frequent feelings of happiness (von Scheve, Esche, and Schupp 2017). Both results indicate that employment results in positive experiences in terms of specific emotions that enter positively into experienced well-being. In a study of the unemployed and employed in France, differences in experienced well-being is not significant, while the unemployed in the USA have reduced experienced well-being (Flèche and Smith 2017). Taken together, it is not clear whether the employed and the unemployed differ in terms of experienced well-being. These ambiguous findings could result from the different locations, the selectivity of the survey populations, measurement issues, empirical approaches to experienced well-being, or the variances in the day-to-day time schedule of employed and unemployed.

Differences in time use are reported in all mentioned studies. At least for working days, activities like commuting and working exclusively shape the days of employees. The unemployed have more leisure time at discretion. It is remarkable that among the reported activities, 'working' ranks among the least pleasurable (Kahneman et al. 2004a, Bryson and MacKerron 2017). A hypothetical *time composition effect* would lead to higher experienced well-being among non-working persons as they avoid unpleasant work. However, a counteracting *saddening effect* is also present: it reduces the intensity of positive valuations of

leisure activities (potentially due to diminishing marginal returns from leisure time) such that the overall difference in experienced well-being depends on effect dominance between time composition and saddening effect (Knabe et al. 2010). Two exceptions from harmful working experiences are 'volunteer' workfare participants (German 'one Euro' jobs) allowing for holidays from unemployment (Knabe, Schöb, and Weimann 2017) and US volunteers who enjoy their work (Gimenez-Nadal and Molina 2015). Both groups experience greater well-being than those who are not working given their income level. We take this as a hint that pleasure from work depends not only on pecuniary aspects, but also that work becomes valuable by other distinct factors.

One under-investigated source for pleasurable experiences from work is experienced meaning. It is a feeling of purpose or a deeper sense in the actual situation or the whole life. Stated preference studies suggest that workers have such a preferences for a general sense of meaning in life (Benjamin et al. 2014, Adler, Dolan, and Kavetsos 2017). Among specific activities, working is described as an activity with a high level of perceived meaningfulness and rather low pleasure (White and Dolan 2009). Workers might obtain meaning from work for several reasons (for an overview see Cassar and Meier 2018) that helps foster identity utility. Identity utility links own actions (like working in a specific job as well as the choice of an occupation or task) to a societal goal. Following a narrative of prescribed behavior, it allows for perceiving own work as meaningful. This is why workers prefer to act in a prescribed way of their own social category (Akerlof and Kranton 2000, Schöb 2013). Experienced meaning during work is an expression of identity utility production during work. However, meaning is also described as biologically determined human drive (Chater and Loewenstein 2016) or as a vehicle to assertion own free will (Karlsson, Loewenstein, and McCafferty 2004). Organizational studies further suggest that each firm's (perceived pro-social) mission allows for meaning during work (Cassar and Meier 2018). While it is difficult to separate the correct channel for such non-monetary advantages from working, the conjecture that the reduced life satisfaction of the unemployed is partly due to a loss of the opportunity to experience meaning is plausible (Cassar and Meier 2018).

Indeed, empirical studies suggest that meaning correlates positively with measures of well-being. For instance, feeling that ones' job is socially useless (the opposite of a meaningful experience) correlates negatively with evaluative job satisfaction. Remarkable here is that those individuals who claim that meaning does not matter for them do not have reduced job

satisfaction (Dur and van Lent 2018).[3] This finding suggests that preference heterogeneity among workers matters a lot in terms of meaning (Bryce 2018). In line with the relevance of meaning, experimental work-effort studies suggest that exogenously increasing the meaning of tasks increases the work effort for this task. This does not hold for all subjects as some persons do not care about meaningfulness at all (Ariely, Kamenica, and Prelec 2008, Chandler and Kapelner 2013, Kosfeld, Neckermann, and Yang 2017). Thus, we expect that pleasure while working is positively associated with meaning.

3. Data

For our analysis, we use the German Socio-Economic Panel Innovation Sample (SOEP-IS). It contains a reduced form of the SOEP survey questionnaire and the representative sampling design of the SOEP household study (Goebel et al. 2019). A broad set of items, like socio-economic status, questions on life satisfaction and income information, are included. Moreover, the SOEP-IS enriches the SOEP household survey with supplemental modules, including experiments and additional questions within the SOEP survey design (Richter and Schupp 2015). One of these modules is a survey-adapted version of the day reconstruction method (Kahneman et al. 2004a). SOEP-IS DRM combines a time use assessment with self-reported well-being for episodes (Anusic, Lucas, and Donnellan 2017).

The SOEP-IS DRM data were collected in 2012, 2013, 2014, and 2015.[4] The interviewer asks the respondents to report what time the respondent got up on the previous day. Subsequently, the respondents were asked episode-wise to choose one out of a set of 23 activities, followed by the question about what they did afterwards. This procedure was repeated until the person reports that she went to bed. Beside the listed activities, respondents could also use an open text field for activities. This open answer episodes are also part of our sample as they were manually categorized (Wolf 2018). Every activity of the previous day is tracked with its exact timing (in 5 minutes increments) from the beginning to its end.[5] After finishing the diary, the respondents assessed each reported activity in their diary by answering the following question:

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[3] A comparable correlation is found for a flourishing scale that encompasses a question on meaning and evaluative life satisfaction (Clark 2016).

[4] More specifically, respondents from the former SOEP core samples E (initially drawn 1998) and I (initially drawn 2009) were asked to answer the DRM module. Respondents from refreshment samples of SOEP-IS were not part of the DRM module.

[5] The diary is complemented by asking for parallel activity spells.

> *"Overall, was this episode [name of episode] from [episode begin] until [episode end] rather pleasant or rather unpleasant?"[6]*

This binary measure of episode satisfaction reduces the (temporal) burden of assessing the whole DRM day for the respondents while still capturing the information for each episode of the previous day. In addition, three activities of each diary were randomly drawn and an additional battery of ratings for more detailed experiences were surveyed:

> *"On a scale from 1 (not at all) to 7 (very strongly) how strongly did you experience the following feelings during the listed activity?"[7]*

Both the location of an activity and the presence of other persons were additionally asked for these random episodes. As we examine the role of work in detail (Section 6), we specifically make use of randomly chosen work episodes. The experience that we use for our analysis in Section 6 is the question on the intensity of *a deeper meaning* – the measure for experienced meaning.

Further, we take evaluative SWB measures as benchmarks: general life satisfaction and the domain of job satisfaction are both measured in SOEP-IS. While life satisfaction is surveyed by asking *"On a scale from 0 (completely dissatisfied) to 10 (completely satisfied), how satisfied are you with your life, all things considered?",* for job satisfaction the response on the question *"On a scale from 0 (completely dissatisfied to 10 (completely satisfied), how satisfied are you with your job?"* is used.

We make use of all SOEP-IS 2012–2015 observations with at least one answered DRM diary per person.[8] During the survey period, 2,299 individuals answered 7,370 DRM diaries, with 1,409 persons surveyed in all four years, 301 persons answering three times, 242 persons answering two times, and 347 persons once. We distinguish between two employment states: employed and unemployed. *Employed* workers are individuals with information on the current occupational position (from untrained worker to executive civil service). We exclude persons working in sheltered workshops, in apprenticeship, traineeship, vocational training, or in

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[6] English translation of the German interview question "Insgesamt gesehen, war diese Episode […] von […] bis […] eher angenehm oder eher unangenehm?"

[7] We use the 2012 English translation of the German interview question "Wie stark haben Sie auf einer Skala von 1 (gar nicht) bis 7 (sehr stark) die folgenden Gefühle bei der angeführten Aktivität empfunden?" The emotions are happiness (Glück), anger (Ärger), frustration (Frust), fatigue (Müdigkeit), mourning (Trauer), worries (Sorgen), pain (Schmerzen), enthusiasm (Begeisterung), satisfaction (Zufriedenheit), boredom (Langeweile), loneliness (Einsamkeit), stress (Stress), and a deeper meaning (einen tieferen Sinn).

[8] Three respondents from the supplement samples (S1 Supplementary 2012 and S2 Supplementary 2013 Sample) accidently filled in the DRM and have been dropped for our analysis.

(partial) retirement. *Unemployed* are individuals who are officially registered as unemployed on the interview day and do not report any working spell in their dairy.[9] Additionally, we drop nine respondents who do not give any information about their activities or pleasure.

Of the A1 presents an overview of the control variables we rely on: socio-demographic characteristics like gender, age, family status, educational attainment, number of adults, and children in household. As a proxy for consumption possibilities, we use individual disposable income, measured as net household income (equalized by the new OECD scale). Health status is measured by the number of doctoral consultations within the last three months. In addition, for the employed, we also use information on the job: monthly labor gross income, the occupational position (self-employed, white-collar worker, blue-collar worker, or civil service), company size, weekly working hours, tenure, and perceived autonomy at work as potential predictors for pleasure at work. On the work episode level, we use DRM questions on a possible second activity during work, the time of beginning and ending a work episode, the number of working spells on the day, the work spell duration, the place of work, and involved persons during work. Due to the survey procedure, a subset of work episodes come along with information on experienced meaning.[10] Given the reported restrictions and mission values on the covariates, the sample of work episodes contains 3,699 observations across 1,308 individuals.

4. Methods and Hypotheses

4.1 Experienced well-being for group comparisons

Experienced well-being combines two aspects: time use and an accompanying experiential valuation of each temporal increment. It allows for aggregating such instantaneous experiences into a single measure. We employ the P-index to compare the daily valuation of experiences of the employed and the unemployed. It is a measure for experienced well-being across the entire DRM day based on episode wise and dichotomous valuations. Thus, person i in survey year t reports $\sum j_{it} = J_{it}$ episodes with specific duration s_{ijt}. The sum of all episode durations on a

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[9] In Germany, unemployed have the permission to work at maximum 15 hours (German Law: § 138 SGB III). The work spells of the unemployed can be informal work or studying episodes. To have a clear interpretation, we drop such cases. As a robustness check, we left these (marginally) working unemployed in the sample and find no different results (available on request).

[10] Consequently, two other episodes of the same person at the same day are available with meaning information making it impossible to deduce the experienced meaning of the remaining non-working time or even the whole day.

day is S_{it}. An episode is either reported as *rather pleasurable* ($p_{ijt} = 1$) or as *rather unpleasurable* ($p_{ijt} = 0$) such that experienced well-being denotes as following:

$$P_{it} = \frac{\sum_{j=1}^{J} s_{ijt} \cdot p_{ijt}}{S_{it}} \tag{4.1}$$

P_{it} records the individual share of pleasurable time awake. In order to keep it comparable between persons, P_{it} is normalized by the total time a person is awake S_{it}. The maximum value of 1.00 characterizes a fully pleasurable day while $P_{it} = 0.00$ indicates a completely unpleasurable day.

While the cardinal time in minutes has clear and comparable meanings,[11] experiences raise methodological issues (for detailed discussions see: Krueger et al. 2009b, Knabe et al. 2010). A main advantage of our study is that we leave the choice of the relevant adjectives for experiences to the respondents' introspection. Therefore, it is not necessary to select positive or negative emotions as a researcher. We interpret the P-index analogously to the inverse of the widespread U-index. The main difference is that it is not based on the intensity of different emotions but based on one statement on experienced pleasure per episode.[12]

In our analysis, we compare conditional group means of P_{it} to investigate difference in experienced well-being of employed and unemployed workers. The fixed-effects estimation equation has the following form:

$$P_{it} = \gamma_0 + \gamma_1 es_{it} + \gamma_2 w_{it} + day_{it}\gamma_a + X'\gamma_b + J'\gamma_c + wave_{it}\tau_t + \alpha_i + \mu_{it},$$
$$where \ \gamma_0 \ \neq \ \gamma_1 \ \neq \gamma_2 \ \neq \gamma_a \neq \ \gamma_b \ \neq \ \gamma_c. \tag{4.2}$$

As the employed are the baseline, the γ_1-coefficient states whether unemployed experience more, equal, or less pleasurable time. While not all employed were working on the reported

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[11] For the sake of simplicity, we circumvent for the theory of individual perceptions of timing and assume that the physical definition of a minute (or another quantity of timing) applies to all respondents the same way.

[12] A widespread method of measuring affective experiences in psychological research is the positive affect scale (PA) and the negative affect (NA) scale. The weighted mean of positive adjectives like "happy" and "enthusiasm" on Likert-scales asking for the intensity constitutes the PA measure. Negative adjectives like "anger" and "worries" are used to generate NA of the specific episode. NA and PA are often used to calculate one single measure of net affect: (PA-NA). There are two drawbacks: (1) the researcher has to choose an appropriate set of relevant adjectives and (2) different scales for these adjectives are intrapersonal interpreted exactly on the same scale. This cardinality issue is discussed in the economic literature and led to the proposal of the so-called u-index (Kahneman and Krueger 2006; Krueger et al. 2009). The u-index summarizes the emotional experience of an episode by dichotomizing it either as pleasurable or unpleasurable. An episode is considered as unpleasant (= 1) in the case the strictly most intensive feeling during this episode is a negative one. This means that the u-index is independent of scaling effects (Knabe et al. 2010, p.871) but the researcher has to choose the set of relevant emotional adjectives.

DRM day (e.g. at the weekend or on holidays), we control for the prevalence of a working episode on the DRM day $w_{it} = \{0; 1\}$. In order to account for day-of-the-week effects, we integrate interview day controls as well as interview year fixed effects τ_t that capture business cycle aspects. To make both groups comparable, we also account for socio-demographic characteristics X, encompassing, for instance, income, workings hours, or family status (see for details Table A1). As respondents are surveyed up to four times with an approximate temporal distance of 12 months, we address endogeneity issues arising from unobserved individual heterogeneity (like personality traits) with individual fixed effects α_i. Thus, γ_1 and γ_2 dummy coefficients are interpreted as average *within* individual change of P_{it} resulting from a labor market status change respective the prevalence of working on the DRM day. We further account for activity-specific fixed effects by the vector J_{it} containing information whether a person was engaged in this activity on the DRM day. Finally, we assume that the idiosyncratic error term ε_{it} is uncorrelated with the explaining variables of every wave within the same individual.

4.2 Pleasure and meaning from work

In the second step, we shift the analytical perspective and exclusively examine working episodes. We investigate the potential channels through which meaning could affect well-being. Therefore, we examine if meaning affects pleasure at work beyond income, working hours, and further standard job characteristics. In line with the literature, we hypothesize that the propensity of reporting work as *rather pleasurable* ($p_{ijt} = 1$) is positively associated with experienced meaning. We estimate the latent propensity of experiencing the working episode p_{it}^* pleasurable as follows:

$$p_{ijt}^* = M'\delta_a + Y'\delta_b + Z'\delta_c + \varepsilon_{it} \quad \varepsilon_{it} \sim NID(0,1)$$

$$
\begin{aligned}
p_{ijt} = 1 \quad & if \ p_{it}^* > 0 \ and \\
p_{ijt} = 0 \quad & if \ p_{it}^* \leq 0 \ and
\end{aligned}
\tag{4.3}
$$

$$\delta_a \neq \delta_b \neq \delta_c.$$

The measure for experienced meaning M is a vector that includes two different specifications. First, using dummies for each category of an ordinal meaning scale allows the representations of non-linear associations. Specifically, persons reporting working as "not meaningful at all" should be controlled for separately as the literature suggests that some people do not value meaning at all. For them, indeed it is not clear whether they experience no meaning because

their work experience is meaningless or they do not care about it. Second, we define M by a dummy that is equal to one if persons report working as "not meaningful at all" and zero otherwise ("extensive meaning scale") and the other meaning values as a metric variable ("intensive meaning scale"). As pleasure at work is not only affected by meaning, we condition on a vector Y of socio-demographic and job characteristics. Further, vector Z characterizes the working spell (for details see Section 3 and Table A1) e.g. for early beginning of work (or shift work), durations of each work spell or reporting behavior like more than one work spell at the DRM day due spell splits from breaks. Further, we assume a random error term ε_{it} with a mean of zero and a variance of one.

To clarify if meaningfulness of work has an overall effect on well-being and not just an effect on the pleasure of the work episode, we regress two general well-being measures on meaning. If meaning is associated with pleasure at work, experienced well-being (P-index) should also show an association. For instance, collecting pleasurable and meaningful episodes may increase experienced well-being. Since the day for employees is characterized by work, pleasure and meaning should have an effect on the general experiences of well-being measure (P-index). As a second indirect measure for the role of meaning, we employ the established job satisfaction measure. The association of experienced meaning to this standard measure for utility from work gives us an additional impression on the relevance of meaning.

5. Experienced well-being of employed and unemployed workers

5.1 Time use and pleasure during activities

The DRM sample comprises 3,384 employed and 315 unemployed respondents. Over the four years under study, 70 persons changed their labor market status. In order to portray representative characteristics of the German residential population, we apply population weights provided by the SOEP (Kroh, Kühne, and Siegers 2017) and compare the weighted socio-demographic characteristics with the unweighted. For a set of basic observable characteristics (age, gender, earnings, etc.) the application of population weights yields only marginal differences (see Table A2). This suggests that the representative sampling procedure of SOEP-IS portraits the German residential population with sufficient precision. The distribution of employed and unemployed person is roughly similar before and after weighting. The average age in our sample is about 44 years and gender is almost equally distributed. Unemployed persons have, on average, less disposable household income, while education

levels are higher among the employed. On average, the respondents report about 12 episodes, such that the sample consists in total of 40,325 episodes.

Initially, we pool all episodes, comparing the employed and unemployed on the activity level. Not all employed worked on the DRM day (due to holidays, weekends, or part-time jobs).[13] The prevalence of most leisure activities is significantly higher for the unemployed (see Table 1). The unemployed more frequently report typical leisure activities (e.g. watching TV, browsing the internet), but they are also more often engaged with non-market work (e.g. doing housework, preparing meals). The only activities with higher frequencies among the employed are *commuting to/from work*, *working*, and *body care*. A diverse picture emerges by comparing durations of the specific activities. The unemployed report longer durations for almost all activities, both non-market work and leisure activities.[14] Differences on the activity level are not statistically significant for many activities due to low case numbers.

In general, experience during the activities are overwhelmingly reported as *rather pleasurable*. Even activities that rank among the least pleasurable like *working*, *commuting*, *housework,* or *renovation tasks* are rated as pleasurable in about 80 % of all reports. Only doctoral consultations are more often reported as *rather unpleasurable.* Differences between the employed and unemployed are small. However, the groups significantly differ for four activities. A large share of the unemployed find caring for children as pleasurable whereas the employed find watching TV, exercising, and strolling as pleasurable more often. These findings are in line with the idea of a 'saddening effect' from unemployment, as the unemployed engage in these latter activities more frequently and for longer times.

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[13] Among the employed, about 65 % worked on the DRM day (for more details see Table 1).

[14] Unemployed report also more minutes of sleep, which we calculate as a residual of the time awake.

Table 1: Time use and pleasure by employment status

Activity	Reported spell (N=)		Reported (share of persons)			Total minutes (per day), unconditional			Total minutes (per day), conditioned on spell reported			Reported "rather pleasureable"		
	E	UE	E	UE	Diff	E	UE	Diff	E	UE	Diff	E	UE	Diff
Way to/from work	3756	./.	0.642	./.	./.	48.375	./.	./.	75.334	./.	./.	0.882	./.	./.
Way to/from leisure activity	1367	141	0.259	0.238	0.020	20.340	29.127	-8.787**	78.663	122.333	-43.670***	0.933	0.943	-0.011
Working	3448	./.	0.714	./.	./.	322.651	./.	./.	451.925	./.	./.	0.861	./.	./.
Shopping	1045	134	0.287	0.403	-0.116***	23.033	39.048	-16.014***	80.190	96.850	-16.660***	0.902	0.858	0.044
Preparing food	2518	341	0.497	0.625	-0.128***	23.212	39.968	-16.756***	46.700	63.909	-17.208***	0.960	0.971	-0.010
Eating	6023	609	0.891	0.914	-0.023	60.412	74.206	-13.794***	67.783	81.163	-13.380***	0.989	0.990	-0.001
Washing oneself	4600	382	0.925	0.895	0.030**	29.645	28.889	0.757*	32.041	32.270	-0.229	0.953	0.966	-0.012
Doing housework	2356	292	0.468	0.610	-0.141***	50.303	73.619	-23.316***	107.465	120.781	-13.316	0.781	0.791	-0.010
Childcare	1507	233	0.226	0.279	-0.054	32.951	63.206	-30.256***	145.949	226.250	-80.301***	0.938	0.970	-0.032**
Meet friends	604	113	0.162	0.276	-0.114***	27.590	58.825	-31.235***	170.374	212.989	-42.614***	0.983	0.973	0.010
Resting/taking a nap	697	106	0.190	0.314	-0.124***	20.634	32.476	-11.842***	108.593	103.333	5.259	0.989	0.972	0.017
Relaxing	1051	111	0.265	0.286	-0.021	25.833	33.556	-7.722**	97.567	117.444	-19.877**	0.996	1.000	-0.004
Intimate relations	36	./.	0.010	./.	./.	0.550	./.	./.	53.143	./.	./.	1.000	./.	./.
Worship/meditation	59	./.	0.014	./.	./.	0.895	./.	./.	65.870	./.	./.	0.983	./.	./.
Watching TV	2720	384	0.680	0.832	-0.152***	99.972	173.556	-73.584***	147.025	208.664	-61.639***	0.988	0.977	0.012**
Reading	719	52	0.183	0.140	0.043	12.299	12.825	-0.526	67.237	91.818	-24.581**	0.994	1.000	-0.006
Computer/internet	939	130	0.231	0.327	-0.096*	24.165	53.413	-29.248***	104.438	163.350	-58.911***	0.967	0.954	0.013
On the phone	361	58	0.098	0.156	-0.058	3.756	11.127	-7.371***	38.515	71.531	-33.015***	0.931	0.897	0.034
Exercising	380	23	0.108	0.060	0.048	11.195	5.381	5.814**	103.229	89.211	14.018	0.979	0.826	0.153***
Visiting doctor	223	33	0.064	0.092	-0.029	6.300	11.365	-5.065***	99.163	123.448	-24.285*	0.583	0.515	0.068
Gardening	283	30	0.076	0.083	-0.007	9.205	12.905	-3.700	121.680	156.346	-34.666**	0.926	0.967	-0.041
Keep oneself busy with pets	600	119	0.125	0.219	-0.094**	7.110	22.857	-15.747***	56.879	104.348	-47.468***	0.968	0.992	-0.023
Have a coffee/tee	350	47	0.090	0.124	-0.033	3.496	6.254	-2.758**	38.660	50.513	-11.853	0.989	1.000	-0.011
Listen to radio/music	29	./.	0.008	./.	./.	0.609	./.	./.	79.231	./.	./.	1.000	./.	./.
Care giving to relatives	32	12	0.008	0.016	-0.008	0.804	4.683	-3.879***	97.143	295.000	-197.857***	0.844	1.000	-0.156
Volunteering	31	./.	0.009	./.	./.	1.107	./.	./.	124.833	./.	./.	1.000	./.	./.
Walking/stroll	67	14	0.019	0.041	-0.023	1.974	3.222	-1.248	106.032	78.077	27.955	1.000	0.929	0.071**
Job search/job center	8	14	./.	./.	./.	./.	./.	./.	./.	./.	./.	./.	./.	./.
Meeting/talking to partner or relatives	175	16	0.048	0.048	0.001	4.833	9.460	-4.627**	99.726	198.667	-98.941***	0.949	1.000	-0.051
Artisitc activity	58	./.	0.017	./.	./.	1.882	./.	./.	113.750	./.	./.	1.000	./.	./.
Service of hairdresser, manicure, pedicure, cosmetician	36	./.	0.011	./.	./.	0.804	./.	./.	75.556	./.	./.	0.972	./.	./.
At party/events/going out	23	./.	./.	./.	./.	./.	./.	./.	./.	./.	./.	./.	./.	./.
Doing DYI, handicrafts, renovate	108	10	0.028	0.029	0.000	4.840	7.048	-2.207	170.625	246.667	-76.042	0.870	0.700	0.170
Playing (board) games, solving quizzes	12	14	./.	./.	./.	./.	./.	./.	./.	./.	./.	./.	./.	./.
Drinking alcoholic drinks, smoking	12	./.	./.	./.	./.	./.	./.	./.	./.	./.	./.	./.	./.	./.

Source: SOEP-IS 2012-2015, own calculations.

Note: E denotes employed, UE unemployed and Diff denotes the difference between employed and unemployed. *** Significant on a 1 % level, ** significant on a 5 % level, * significant on a 10 % level. ./. Values from cells with N < 30 in total or N < 10 for the distinct labor market status are truncated by the authors due to low case numbers.

5.2 Experienced well-being

The comparison of the aggregate experienced well-being measures is reported in Table 2. Experienced well-being of the unemployed is higher than the experienced well-being of the employed. The employed spend on average 91.3 percent of their time awake in *rather pleasurable* activities whereas the unemployed experience 94.2 percent of their time in a subjectively *rather pleasurable* mood. Although both shares are rather high, we find that the difference is statistically significant (*p < 0.00*). For initial evidence on the role of working for experienced well-being, we calculate a hypothetical P-index. The hypothetical experienced well-being level is calculated such that it reports the values as if the working employed had not actually worked. Hence, the hypothetical P-index reports experienced well-being without the time of working episodes during the DRM day and its accompanying valuation.[15] A higher hypothetical experienced well-being compared to the actual experienced well-being indicates a negative impact from the work episodes. Comparing employed without any working episodes with unemployed shows that both groups have a similar experienced well-being of about 0.94 (*p < 0.31)*. This finding suggests that working episodes of the employed particularly harm the overall experienced well-being.

Table 2: Measures of experienced well-being

Status	P-index	P-index (without work)	Life Satisfaction	N
Employed	0.913	0.949	7.453	3384
Unemployed	0.942	0.942	6.044	315
Difference: E vs. UE	p<0.00[***]	p<0.31	p<0.00[***]	3699

Source: SOEP-IS 2012-2015, own calculations.
The 'P-index' reports the average share of pleasurable time awake on the DRM day (see section 3). The 'P-index without work' reports this share of pleasurable time excluding working and commuting episodes. The time of these episodes are also excluded from the time weighting. Life satisfaction was taken from the respondents answer on the general life satisfaction question in SOEP-IS (scale: 0-10).

Contrasting experienced well-being with the general life satisfaction of the same respondents replicates a standard result that the unemployed are significantly less satisfied with their lives. Thus, experienced well-being and life satisfaction show opposite signs when comparing the employed and unemployed. While experienced well-being of the unemployed is higher, life

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[15] We exclude the *work* and *commuting to/from work* episodes.

satisfaction is lower for the unemployed. This is in line with the "unemployed are dissatisfied with their lives, but having a good day" hypothesis of Knabe et al. (2010).[16]

In the next step, we run multivariate regressions on the P-Index controlling for individual fixed effects (see Table 3). We stepwise integrate controls for day and year effects (col. 1), control for the prevalence of work spells (col. 2), and, finally, integrating socio-demographic controls and the set of dummies for the prevalence of other activities on the DRM day (col. 3). The experienced well-being level increases when becoming unemployed and decrease when being reemployed. Due to low case numbers, this finding is statistically insignificant. The inclusion of a dummy variable indicating the prevalence of a working spell on the DRM day is associated with reduced experienced well-being of 3.8 percentage points less pleasurable time compared to a work-free day of the same person (col. 2). This indicate that working is, on average, detrimental for employed. Controlling for all other activities and socio-demographics slightly increases this effect to 4.5 percentage points less pleasurable time (col. 3). The prevalence of job search activities, visits to the job center, and visits to a doctor are also negatively associated with the P-index. Negative experiences are reduced by the prevalence of gardening or person to person services e.g. manicure or hairdresser. By far the most intensive positive association with experienced well-being is the prevalence of time spent on consuming alcohol and cigarettes.

In summary, daily experienced well-being is, on average, negatively associated with working given income, hours, and time-stable individual characteristics. There are only a few activities that yield the same negative impact on experienced well-being as working. As the unemployed do not report working spells, they, on average, experience more well-being. However, while visits to a doctor (due to illness) or the job center (looking for a job) are not at the discretion of the respondents, working has a substantially choice component. As most workers report their working spells as rather pleasure, we attempt to understand which non-pecuniary aspects of work episodes (given hours and earnings) predict (un-)pleasant experiences. One under-investigated factor that can be obtain from work is experienced meaning. Therefore, we shift the perspective of analysis towards the working spells.

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[16] In order to test the validity of the findings, we use alternative experienced well-being measures. Based on positive and a negative affect scales, we find that the unemployed also experience significantly more positive moods ($p < 0.02$) and less negative moods (see Appendix Table A3).

Table 3: Within variation of experienced well-being of employed and unemployed workers

Dependent variable:	(1) P-index Coef.	Std. Err.	(2) P-index Coef.	Std. Err.	(3) P-index Coef.	Std. Err.
Labor market status: Unemployment	0.026	0.029	0.028	0.029	0.033	0.03
Reported: Work Spell			-0.038***	0.008	-0.048***	0.012
year (Reference: 2012)						
2013	0.003	0.007	0.019	0.016	0.017	0.016
2014	-0.006	0.008	0.027	0.03	0.02	0.03
2015	0.009	0.008	0.06	0.046	0.052	0.045
DRM day (Reference: Wednesday)						
Sunday	-0.008	0.012	-0.008	0.012	-0.007	0.013
Monday	-0.006	0.009	-0.006	0.009	-0.005	0.009
Tuesday	-0.008	0.01	-0.007	0.01	-0.003	0.01
Thursday	-0.011	0.011	-0.009	0.011	-0.008	0.011
Friday	0.013	0.013	0.014	0.013	0.015	0.013
Saturday	0.001	0.021	0.002	0.021	0.001	0.023
HH income (log)					0.017	0.016
Age					-0.012	0.018
Age^2					0.000	0.000
Family Status (Reference: Single)						
Married					-0.026	0.029
Divorced/Seperated					-0.009	0.034
Widowed					-0.142	0.09
Number of doctural consultations (last 3 month)					0.001	0.001
Number of Persons in HH					-0.023**	0.009
Number of Children in HH					0.017	0.013
Way to/from work					0.013	0.011
Way to/from leisure activity					-0.001	0.008
Shopping					0.008	0.008
Preparing food					0.009	0.008
Eating					-0.005	0.012
Washing oneself					-0.012	0.015
Doing housework					-0.007	0.009
Childcare					0.016	0.012
Meet friends					0.009	0.008
Resting/taking a nap					0.006	0.009
Relaxing					-0.004	0.007
Intimate relations					-0.016	0.039
Worship/meditation					-0.011	0.024
Watching TV					0.013	0.009
Reading					0.002	0.009
Computer/internet					0.007	0.009
On the phone					-0.006	0.01
Exercising					0.029***	0.01
Visiting doctor					-0.062***	0.015
Gardening					0.031**	0.012
Keep oneself busy with pets					0.004	0.011
Have a coffee/tee					0.020*	0.01
Listen to radio/music					0.011	0.032
Care giving to relatives					-0.027	0.028
Volunteering					0.04	0.027
Walking/stroll					-0.034**	0.017
Job search/job center					-0.066*	0.036
Meeting/talking to partner or relatives					-0.001	0.013
Artisitc activity					0.011	0.029
Service of hairdresser, manicure, pedicure, cosmetician					0.048**	0.023
At party/events/going out					0.02	0.021
Doing DYI, handicrafts, renovate					-0.029	0.025
Playing (board) games, solving quizzes					0.037	0.035
Drinking alcoholic drinks, smoking					0.087**	0.041
Constant	0.941***	0.01	0.939***	0.029	0.930***	0.036
Number of observations	3699		3699		3699	
Number of persons	1308		1308		1308	
R² (within)	0.01		0.02		0.05	

Source: SOEP-IS 2012-2015, own calculations.
Note: *** significant on a 1 % level, ** significant on a 5 % level, * significant on a 10 % level.

6. Pleasure and meaning during work

6.1 Does experienced meaning explain pleasure at work?

Working is one of the activities that most harms experienced well-being. However, most respondents report that their working episodes are overall valued *rather pleasurable* and working is a widespread activity. Therefore, we further investigate the sources of pleasure from work. In this section, we examine if pleasure is affected by meaning during work (6.1) and overall experienced well-being and job satisfaction (6.2) are influenced from experienced meaning. Initially, we rank the reported experienced meaning between activities during each episode (see Figure 1). The ranking of average valuations shows almost a reversed picture in comparison to pleasure (see Table 1). While working ranks very low in terms of pleasure, the opposite pattern emerges when looking at meaning. Only taking care of children and exercising rank higher in terms of experienced meaning. This indicates that meaning could be a highly relevant predictor for pleasure during these activities.

Figure 1: Average level of experienced meaning by activity
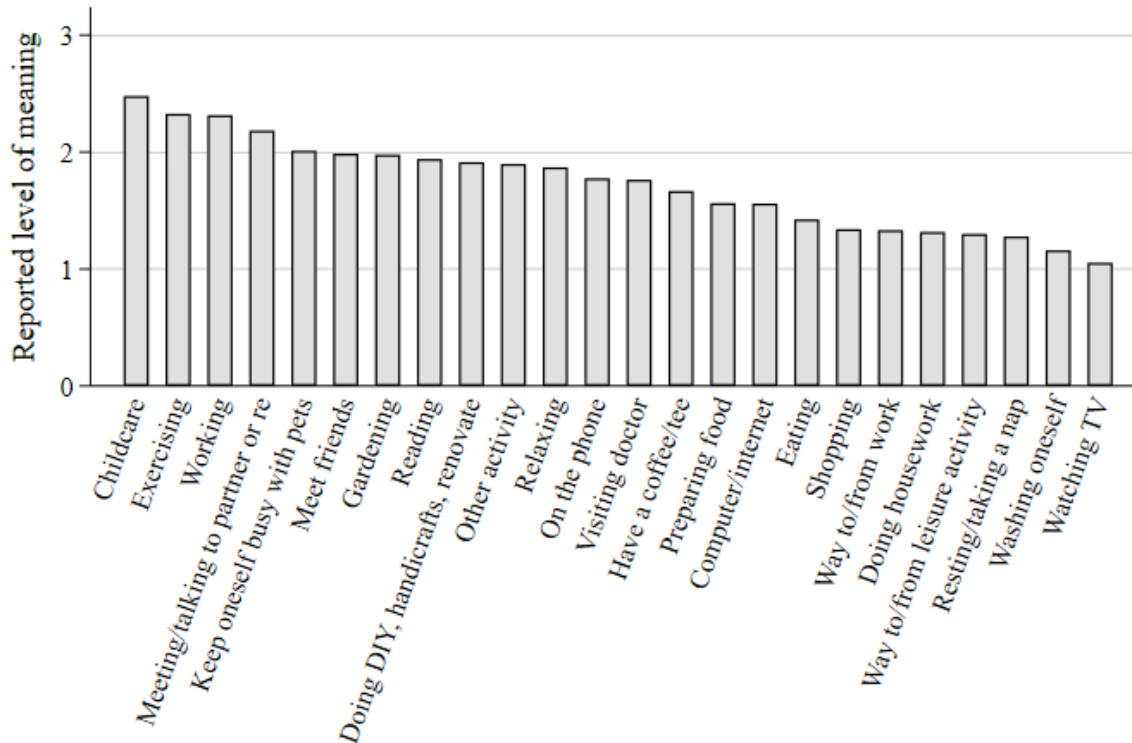
Source: SOEP-IS 2012-15, own calculations. Graph depicts the average level of experienced meaning on a scale from 1-7 for different activities. Calculations based on three random episodes from each DRM interview with a question on experienced meaning during this activity. Activities with less than 30 observations are dropped. The total case numbers are N = 10.668 episodes.

To understand whether meaning also affects experienced pleasure at work, we estimate a probability model for all observed work episodes. When focusing on randomly drawn episodes with information on experienced meaning (see section 3), the sample of working spells shrinks to 849 episodes. Table 4 depicts the resulting average marginal effects in four specifications. In columns 1 and 2, we integrate experienced meaning as dummies variables for each category (scale from 1 'not at all' to 7 'very strongly'). We use the scale category two as reference since it represents the lowest value on the "intensive meaning scale." We stepwise integrate controls for survey effects (col.1) and socio-demographic factors, job characteristics, and DRM-specific characteristics (col. 2). To account for non-linear associations (col. 3 and col. 4), we repeat the previous regressions and use a modified experienced meaning control. Instead of dummies for each category, we distinguish between an extensive and intensive meaning scale. Therefore, we integrate a dummy for workers reporting that work is *not meaningful at all* ("extensive meaning scale") and zero otherwise (the scales two to seven are recoded to zero). In addition, we introduce a metric variable for meaning including all categories. In column 4, we add an interaction term of meaning with males (0/1) in order to investigate gender differences.

We find that working is perceived as pleasurable if no meaning is experienced at all or the meaning score is high. This non-linear association suggests that a group of workers sees working as completely meaningless but experiences working as pleasurable while other groups have an increasing propensity for pleasure with increasing experienced meaning. Including all controls (col. 2) does not change this finding. Accounting for the non-linearity in meaning yields a positive association between meaning and pleasurable working episodes. Again, the only exception is the dummy-indicator for *not meaningful at all*. The positive coefficient indicates that compared to the baseline probability of all other persons, workers experiencing *no meaning at all*, also report a higher probability of pleasure at work. Column 4 shows that this holds mainly for women as the ordinal meaning coefficient for males has the opposite sign and magnitude canceling the overall effect almost out.

Table 4: Meaning as predictor for pleasure at work?

Dependent variable:	(1) Pleasure = 1		(2) Pleasure = 1		(3) Pleasure = 1		(4) Pleasure = 1	
	AME	Std.E.	AME	Std.E.	AME	Std.E.	AME	Std.E.
Meaningful (Ref: 2)								
Meaningful 1 -Not at all	0.130**	0.053	0.129**	0.051				
Meaningful 3	0.022	0.070	0.041	0.066				
Meaningful 4	0.089	0.058	0.076	0.056				
Meaningful 5	0.106*	0.060	0.119**	0.057				
Meaningful 6	0.090	0.061	0.089	0.059				
Meaningful 7 -Very strongly	0.152**	0.063	0.165***	0.058				
Meaningful Dummy -Not at all					0.125***	0.033	0.186***	0.048
Meaningful (1-7)					0.026***	0.009	0.047***	0.015
Meaningful -Not at all * male							-0.146	0.103
Meaningful (1-7) * male							-0.034*	0.019
Labor Income (log)			0.060***	0.022	0.058***	0.022	0.057**	0.022
Weekly working hours			-0.002	0.003	-0.002	0.003	-0.003	0.003
Weekly working hours (sq.)			0.000	0.000	0.000	0.000	0.000	0.000
Survey Effects	X		X		X		X	
Socio-demographic factors			X		X		X	
Job specific characteristics			X		X		X	
DRM specific characteristics			X		X		X	
Number of observations	849		849		849		849	
Pseudo R2	0.025		0.160		0.158		0.162	

Source: SOEP-IS 2012-15, own calculations.
Note: The analysis comprises all working spells reported by employed individuals. Survey effects: year and DRM day; socio-demographic factors: age, male, family status, number of doctoral consultations, education, number of persons in household, number of children in household; job specific characteristics: tenure, tenure (sq.), duration in work spell, duration in work spell (sq.), occupation position, autonomy, company size; DRM specific characteristics: second activity, begin and end of the work spell, place of work, involved person.

6.2 Relevance of meaning for experienced well-being and job satisfaction

Perceived meaning at work is associated with a higher propensity to experience working pleasurable for some workers. In this section, we examine how meaning influences overall experienced well-being of the DRM-day. In order to fit this result into the labor market literature, we validate this finding by regressing it on evaluative job satisfaction. As a standard measure for utility from work, we examine if job satisfaction is also affected by experienced meaning.

Table 5 presents the results. Meaning is significantly positive associated with experienced well-being (col. 1). The higher experienced meaning during the work episode is, the higher is the share of pleasurable time for the respondents, given income, working hours, socio-demographic controls, job characteristics, and other controls (entire table in Appendix A5). Again, the dummy-indicator for *not meaningful at all* shows that, compared to the average level of meaningful work, individuals experiencing more pleasurable time. Hence, the association of experienced meaning with pleasurable working episodes is also reflected in the experienced well-being of the whole day.

Further, in cols. 2 and 3, we regress experienced meaning on job satisfaction, measured on a 0 – 10 scale (for details see section 3). Experienced meaning is positively associated with job satisfaction. The higher the experienced meaning during a work episode, the higher is job satisfaction. As before, the positive coefficient of the *not meaningful at all*-indicator has a substantially higher level of job satisfaction. In contrast to experienced well-being, labor income and working hours per week are associated with job satisfaction. In column 3, we add a dummy indicating that working episodes are pleasurable (1 if the episode was pleasurable, 0 otherwise). The positive association of experienced meaning with job satisfaction becomes only slightly weaker while the other coefficients remain qualitatively the same. Pleasure during work increases, *ceteris paribus*, job satisfaction. Experienced meaning is also a positive predictor of job satisfaction, given that the group of individuals with *no meaning at all* are also more satisfied with their jobs.

Experienced meaning and experienced pleasure both come along with higher experienced well-being, indicating more pleasurable time on an average day. Experienced meaning qualitatively has a similar association with job satisfaction as does experienced well-being. Hence, the evaluative measure job satisfaction is also positively affected by experienced meaning (of a work episode of the DRM day). Further, the non-linearity of this meaning association is also similar: those workers who experience *no meaning at all* (about 30 % of the workers report *no meaning at all*) also report higher job satisfaction. Comparing the impact of the income coefficient with the meaning and pleasure coefficients suggest that, in terms of job satisfaction, a pleasurable working episode is worth about three log-points of income. Or, in other words: A more than 300 percent increase in income could compensate for unpleasant work episode. Experienced meaning is also valued relatively high with a positive coefficient such that a 60 percent increase in income would buy a meaning point in order to keep job satisfaction constant.

Table 5: Meaning, experienced well-being and job satisfaction

Dependent variable:	(1) P-index		(2) Job Satisfaction		(3) Job Satisfaction	
	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. Err.
Meaningful Dummy -Not at all	0.082***	0.025	0.641***	0.237	0.512**	0.236
Meaningful (1-7)	0.016***	0.006	0.185***	0.054	0.161***	0.053
Pleasure					0.900***	0.194
Labor income (log)	0.012	0.012	0.316**	0.126	0.269**	0.125
Hours per week	0.002	0.002	-0.044**	0.020	-0.042**	0.020
Hours per week (sq.)	0.000	0.000	0.001**	0.000	0.001**	0.000
Survey Effects	X		X		X	
Socio-demographic factors	X		X		X	
Job specific characteristics	X		X		X	
DRM specific characteristics	X		X		X	
Number of observations	849		849		849	
Pseudo R^2	0.025		0.160		0.190	

Source: SOEP-IS 2012-15, own calculations.
Note: The analysis comprises all working spells reported by employed individuals. Survey effects: year and DRM day; socio-demographic factors: age, male, family status, number of doctoral consultations, education, number of persons in household, number of children in household ; job specific characteristics: tenure, tenure (sq.), duration in work spell, duration in work spell (sq.), occupation position, autonomy, company size; DRM specific characteristics: second activity, begin and end of the work spell.

7. Concluding Discussion

To our knowledge, we are the first to examine experienced well-being for a nationally representative population with a uni-dimensional measure for episode pleasure and with individual fixed effects. We find that experienced well-being for the unemployed in Germany is higher than for the employed. Thus, the unemployed experience more pleasurable minutes awake. This paper shows that this is due to the given non-prevalence of working episodes for unemployed and not dependent on the employed or unemployed status. This difference holds after controlling for income and other covariates as well as, in particular, after introducing person fixed effects controlling for person-inherent traits. Thus, evaluative life satisfaction and experienced well-being differ substantially. The incorporation of individual time use with valuations of time renders being unemployed less detrimental then just focusing on evaluative life satisfaction.

A substantial minority of employees experiences unpleasant working episodes that harm their overall experienced well-being. This relatively high share of unpleasant experiences during work compared to other activities confirms the findings obtained for work experiences in the UK, France, and the US that examine the intensity of pleasure (Bryson and MacKerron 2017, Flèche and Smith 2017). Our simple pleasure (vs. no pleasure) indicator seems sufficient

to identify reasons for work misery while reducing costs (survey time). Beyond other factors, like wage, working hours, or episode-timing, experienced meaning is a significant predictor of pleasure during work. The higher is experienced meaning during work, the higher is the propensity to report a pleasurable working episode. However, this association is non-linear, as persons reporting *no meaning at all* also have a higher (than average) propensity to report a pleasurable work episode. One potential explanation for this finding suggests that meaning depends on preference heterogeneity. Not all persons wish to experience a meaningful job. They still report *no meaning at all,* even if working is pleasurable for them. This explanation is in line with evidence from the lab showing that endogenous meaning variations of specific tasks affect only specific individuals (Fehrler and Kosfeld 2014). One source for such a heterogeneity are gender differences. We find that the positive association of meaning and pleasure during work is due to the women in sample. For men, we hardly find any positive association. As experienced meaning is positively associated with pleasure during work, it is not surprising that we find the same association for daily experienced well-being. Evaluative job satisfaction, however, measures completely different components of SWB, but still it shows the same association with experienced meaningfulness. In line with Kahneman and Deaton (2010), we find that earnings only matter for evaluative measures.

Our results have implications for personnel economics and labor market policy. On the firm level, it seems clear that worker heterogeneity in terms of a "taste for meaning" makes it necessary for the management to know the underlying structure of its workforce's preference structure. Indeed, an incentive compatible contract for such workers is feasible (Besley and Ghatak 2017) – and gains more relevance with an increasing share of female workers who prefer meaning during work.

In a labor supply framework, a preference for meaning helps to explain the intensive margin. Excessive extra hours with a low marginal monetary return (workaholic behavior) might come along with experienced meaning that intrinsically generates pleasure. Further, more pleasure then expected are generated from relatively low paid jobs are also the case, if they offer meaning beyond monetary remuneration. Occupational choice might also be affected by the search for meaning. For instance, women's occupational choices may differ from men's choices.

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Appendix

Table A1: Description of covariates

Characteristic	Description
Survey effects	
Year	Year defines the year of the interview using four dummies: 2012, 2013, 2014 and 2015.
DRM day	DRM day describes the day the respondent reports about using 7 dummies (Monday to Sunday). The DRM dataset is the base to generate this variable.
Socio-demographic characteristics	
Age	The survey year minus year of birth defines the age of the respondent.
Male	This variable is a dummy taking the value '1' if respondent is a male.
Disposable income (Household)	The variable hginc in dataset hgen is the base to generate the disposable household income.
Disposable income (Household, equival. OECD)	This variable uses hginc, hgnrpers and hgnrkid14 from the dataset hgen to generate the equivalized disposable household income. It divides hghinc by 1+0.5*(number of persons in household - number of children (below 14) in household - 1) + 0.3* number of children (below 14) in household).
Labor income (log)	This variable presents the logarithm of the gross labor income. The variable pglabgro from the dataset pgen allows to generate the gross labor income of the respondent.
Education level	Three dummies describe education: low, middle and high. These dummies take the value '1' if respondent highest education level is primary or secondary (low), upper secondary or post-secondary non-tertiary (middle) or short-cycle tertiary or tertiary (high) education. The variables pgisced from the dataset pgen are the base to generate these dummies.
Family status	Four dummies describe the family status: single, married, and divorced/seperated/widowed. The variable pgfamst from the dataset pgen is the base to generate this variable.
Number of Persons in Household	The number of persons in the household is a variable from the dataset hgen.
Number of Children in Household	This variable comprises the number of children (below 18 years) in the household. The dataset h and hgen provide the information to generate this variable.
Number of doctoral consultations (last 3 month)	The dataset p provides counts the number of doctoral consultations in the last three months and is provided in the dataset p.
Job specific characteristics	
Labor market status: unemployed	This dummy describes the labor market status and takes the value '1' if the respondent is unemployed. 'Unemployed' characterizes persons who are officially registered as unemployed and report no weekly working hours (pgtatzt). 'Employed' characterizes individuals with a current occupational position (from untrained worker to executive civil service) working full-time or part-time, including marginal or irregular employed people. The variables pgstib and empl from the dataset pgen provide this information.
Weekly working hours	The weekly working hours base on a generation using the variable pgtatzt in the dataset pgen.
Tenure	The job tenure of a person.
Occupational Position	Four dummies describe the occupational position: worker, self-employed, employee and civil servant. The variable pgstib from the dataset pgen provides the information to generate the occupational position.
Autonomy	Five dummies describe autonomy: low, low-middle, middle, middle-high and high. The generation uses pgautono from the dataset pgen that has this five expressions.
Company Size	Three dummies describe company size: below 200, 200-2000, >2000. The dataset pgen provides this information.
DRM specific characteristics	
Number of episodes per DRM day	This variable counts the number of episodes per reported DRM day and is generated from the information in the DRM dataset.
Reported activity	The respondents were asked episode-wise to choose activities out of a set of 23 and one open answering option. In the second wave, the activities were extended to 25. In addition, we recoded open answering options into activities as advised in Wolf (2018).
Reported second activity while working	The respondents were asked episode-wise to choose activities out of a set of 23 and one open answering option. Until the second wave, the activities were extended until 25. In addition, we recoded open answering options into activities as advised in Wolf (2018).
Begin to work of first spell	12 dummies for every two hours describe the begin to work of the first spell,e.g. start work between 0 to 2 am.
Finish with work of last spell	12 dummies for every two hours describe the end of work of the last spell,e.g. finish work between ten to 12 pm.
Duration in work spell	This variable describes the duration of the reported work spell.
Break during work	Three dummies describe a break during work: no break, 1 break or >1 break.
Involved person	Eight dummies describe the involved persons: no one, partner, children, colleagues, clients, parents, boss or other.
Place of work	Three dummies describe place of work: at work, at home or elsewhere.

Table A2: Pooled sample of DRM respondents by employment status

	unweighted		population weights	
	Employed	**Unemployed**	**Employed**	**Unemployed**
Age	44.88	44.67	43.61	44.48
Female (share)	0.50	0.51	0.48	0.54
Disposable income (Household)	3336.95	1442.91	3248.12	1467.74
Disposable income (Household, equival. OECD)	1930.20	875.00	1932.12	919.53
Earnings (gross labor income)	2642.94	./.	2704.29	./.
Education level (share)				
Low (ISCED 1-2)	0.09	0.24	0.09	0.22
Middle (ISCED 3-4)	0.57	0.63	0.59	0.66
High (ISCED 5-6)	0.34	0.13	0.32	0.12
Marital status (share)				
Single	0.24	0.35	0.25	0.38
Married	0.60	0.34	0.57	0.35
Divorced	0.14	0.29	0.15	0.25
Widowed	0.02	0.03	0.03	0.03
Number of Person in Household	2.71	2.49	2.62	2.36
Number of Children in Household	0.67	0.63	0.64	0.59
Weekly working hours	36.58	./.	37.38	./.
Tenure	12.00	./.	11.26	./.
Occupational Position (share)				
Worker	0.18	./.	0.20	./.
Self-employed	0.10	./.	0.10	./.
Employee	0.65	./.	0.64	./.
Civil Servant	0.07	./.	0.07	./.
DRM day (share)				
Sunday	0.10	0.11	0.11	0.12
Monday	0.24	0.24	0.25	0.23
Tuesday	0.21	0.25	0.19	0.22
Wednesday	0.18	0.20	0.17	0.22
Thursday	0.14	0.13	0.14	0.15
Friday	0.11	0.06	0.11	0.06
Saturday	0.02	0.01	0.02	0.01
Number of episodes per DRM day	11.88	12.17	11.45	12.21
Number of observations (= DRM interviews)	3384	356	./.	./.

Source: SOEP-IS 2012-2015.

*Note: ./. denotes not available or missing information. The used population weights are provided
by the SOEP-IS and calculated as in the SOEP. For further information see Kroh et al. (2017).*

Table A3: Positive and negative affect as measures for experience well-being

Status	Postive affect	Negative affect	P-index	P-index (without work)	N
Employed	2.780	0.636	0.913	0.948	3383
Unemployed	2.954	0.611	0.942	0.942	315
Difference: E vs. UE	p<0.02**	p<0.61	p<0.00***	p<0.37	3698

Source: SOEP-IS 2012-2015, own calculations.

Note: Positive affect was generated from the equally weighted averages for happy, satisfaction, enthusiasm (scale 1-7). The negative affect scale was generated from equally weighted averages for anger, frustration, mourning, worries, and stress. For each person in each year only three episodes contain this information (see section 3). The t-tests for mean equivalence of employed and unemployed are reported in the bottom line.

Table A4: Meaning as predictor for pleasure at work (full table)?

	(1)		(2)		(3)		(4)	
	Pleasure = 1		Pleasure = 1		Pleasure = 1		Pleasure = 1	
Dependent variable:	AME	Std.E.	AME	Std.E.	AME	Std.E.	AME	Std.E.
Meaningful (Ref: 2)								
Meaningful 1 - Not at all	0.130**	0.053	0.129**	0.051				
Meaningful 3	0.022	0.070	0.041	0.066				
Meaningful 4	0.089	0.058	0.076	0.056				
Meaningful 5	0.106*	0.060	0.119**	0.057				
Meaningful 6	0.090	0.061	0.089	0.059				
Meaningful 7 -Very strongly	0.152**	0.063	0.165***	0.058				
Meaningful Dummy -Not at all					0.125***	0.033	0.186***	0.048
Meaningful (1-7)					0.026***	0.009	0.047***	0.015
Meaningful -Not at all * male							-0.146	0.103
Meaningful (1-7) * male							-0.034*	0.019
Labor Income (log)			0.060***	0.022	0.058***	0.022	0.057**	0.022
Weekly working hours			-0.002	0.003	-0.002	0.003	-0.003	0.003
Weekly working hours (sq.)			0.000	0.000	0.000	0.000	0.000	0.000
Tenure			-0.003	0.004	-0.003	0.004	-0.003	0.004
Tenure (sq.)			0.000	0.000	0.000	0.000	0.000	0.000
duration in work spell			-0.016	0.023	-0.014	0.023	-0.014	0.023
duration in work spell (sq.)			0.002	0.001	0.001	0.001	0.001	0.001
Occupational Position (Ref: Blue-collar worker)								
Self-Employed			0.064	0.062	0.066	0.063	0.071	0.063
White-collar worker			0.021	0.050	0.023	0.051	0.028	0.051
Civil Service			-0.014	0.074	-0.013	0.074	-0.008	0.074
Autonomy (Ref: Middle level)								
Low			0.109**	0.055	0.111**	0.054	0.110**	0.054
Low-Middle			0.113***	0.031	0.113***	0.031	0.113***	0.031
Middle-High			0.007	0.038	0.005	0.038	0.005	0.038
High			-0.044	0.082	-0.050	0.082	-0.051	0.082
Company Size (Ref.: below 200)								
200-2000			0.032	0.029	0.032	0.029	0.031	0.029
>2000			-0.052	0.034	-0.051	0.034	-0.047	0.034
Male			0.038	0.028	0.037	0.028	0.038	0.034
age			-0.004	0.009	-0.005	0.008	-0.005	0.009
age (sq.)			0.000	0.000	0.000	0.000	0.000	0.000
Family Status (Ref: Single)								
Married			0.062	0.039	0.063	0.039	0.063	0.039
Divorced/Seperated			0.131***	0.041	0.130***	0.042	0.133***	0.042
Number of doctoral consultation (last 3 months)			0.001	0.004	0.001	0.004	0.001	0.004
Education (Ref: middle)								
Low			0.006	0.044	0.007	0.044	0.016	0.042
High			-0.020	0.033	-0.017	0.033	-0.014	0.033
Number of Persons in HH			-0.004	0.017	-0.006	0.017	-0.005	0.017
Number of Children in HH			-0.017	0.023	-0.016	0.023	-0.017	0.023
year (Ref: 2012)								
2013	0.023	0.034	0.025	0.031	0.026	0.031	0.027	0.031
2014	-0.010	0.036	-0.010	0.033	-0.009	0.034	-0.007	0.033
2015	0.033	0.036	0.016	0.034	0.015	0.034	0.016	0.034
DRM day (Ref: Wednesday)								
Sunday	-0.106	0.070	-0.065	0.065	-0.059	0.065	-0.069	0.065
Monday	0.034	0.038	0.041	0.035	0.043	0.036	0.037	0.035
Tuesday	0.016	0.039	0.012	0.038	0.013	0.038	0.007	0.037
Thursday	0.014	0.042	0.025	0.039	0.026	0.040	0.023	0.039
Friday	-0.018	0.051	-0.020	0.047	-0.016	0.047	-0.019	0.047
Saturday	0.014	0.137	0.119**	0.053	0.124**	0.051	0.127***	0.048
Second activity:								
Eating			0.110***	0.025	0.110***	0.025	0.112***	0.025
Childcare			-0.810***	0.015	-0.810***	0.015	-0.810***	0.015
Computer/internet			0.029	0.100	0.023	0.105	0.029	0.100
On the phone			0.069	0.083	0.073	0.082	0.073	0.082
Radio			-0.035	0.139	-0.039	0.140	-0.038	0.142
Care giving to relatives			-0.080	0.215	-0.070	0.212	-0.106	0.227
Begin to work (Ref: 8-10 am)								
2-4 am			-0.336**	0.162	-0.319**	0.160	-0.318**	0.160
4-6 am			-0.171***	0.064	-0.164***	0.063	-0.166***	0.063
6-8 am			-0.075**	0.032	-0.073**	0.032	-0.075**	0.032
10-12 am			0.010	0.049	0.009	0.050	0.002	0.050
0-2 pm			-0.093	0.074	-0.095	0.076	-0.095	0.076
2-4 pm			0.082***	0.030	0.083***	0.030	0.080**	0.031
4-6 pm			0.044	0.070	0.042	0.074	0.038	0.077
6-8 pm			-0.294	0.236	-0.316	0.241	-0.296	0.238
8-10 pm			-0.026	0.124	-0.023	0.123	-0.017	0.118
Finish with work (Ref: 4-6 pm)								
6-8 am			-0.398	0.284	-0.378	0.286	-0.374	0.284
8-10 am			0.079	0.110	0.073	0.116	0.068	0.116
10-12 am			0.097*	0.054	0.099*	0.053	0.096*	0.053
0-2 pm			0.081**	0.040	0.078*	0.041	0.079**	0.040
2-4 pm			0.000	0.037	-0.006	0.037	-0.010	0.037
6-8 pm			-0.096**	0.049	-0.096**	0.049	-0.095**	0.048
8-10 pm			-0.059	0.069	-0.056	0.068	-0.061	0.068
10-12 pm			0.032	0.057	0.034	0.056	0.033	0.055
Break during work (Ref.: No)								
1 break			0.072**	0.032	0.074**	0.032	0.073**	0.032
>1 break			0.060	0.038	0.059	0.038	0.060	0.038
involved person (Ref.: no one)								
partner			0.041	0.081	0.035	0.081	0.043	0.081
colleagues			0.078**	0.033	0.080**	0.032	0.083***	0.032
clients			0.027	0.036	0.027	0.035	0.023	0.036
children			0.920***	0.120	0.927***	0.118	0.930***	0.123
parents			0.047	0.145	0.054	0.145	0.088	0.140
boss			-0.039	0.040	-0.038	0.040	-0.040	0.039
other			0.069	0.048	0.063	0.048	0.068	0.047
place of work (ref.: at work)								
at home			0.027	0.040	0.026	0.041	0.027	0.041
elsewhere			0.059	0.046	0.061	0.045	0.062	0.044
Number of observations	849		849		849		849	
Pseudo R²	0.025		0.160		0.158		0.162	

Source: SOEP-IS 2012-15, own calculations.

Note: The analysis comprises all working spells reported by employed individuals. Duration in work spell in hours. Additionally, second activities as on the way to work, shopping, preparing food, washing oneself, doing housework, resting, relaxing, meditation, watching TV, exercising, taking care of pets, other activities, drinking coffee/tea or drinking alcoholic drinks/smoking and starting to work between 0-2 am or 10-12 pm and finish with work as finish between 0-4 am or 4-6 am and widowed are automatically dropped by only a small number of observations and no variation with these variables.

Table A5: Meaning and experienced well-being (full table)

Dependent variable:	(1) P-index Coef.	Std. Err.	(2) Job Satisfaction Coef.	Std. Err.	(3) Job Satisfaction Coef.	Std. Err.
Meaningful Dummy -Not at all	0.082***	0.025	0.641***	0.237	0.512**	0.236
Meaningful (1-7)	0.016***	0.006	0.185***	0.054	0.161***	0.053
Pleasure					0.900***	0.194
Labor income (log)	0.012	0.012	0.316**	0.126	0.269**	0.125
Weekly working hours	0.002	0.002	-0.044**	0.020	-0.042**	0.020
Weekly working hours (sq.)	0.000	0.000	0.001**	0.000	0.001**	0.000
Tenure	0.001	0.002	-0.021	0.022	-0.019	0.022
Tenure (sq.)	0.000	0.000	0.000	0.001	0.000	0.001
duration in work spell	-0.003	0.011	-0.051	0.121	-0.046	0.120
duration in work spell (sqrt)	0.001	0.001	-0.003	0.007	-0.003	0.007
Occupational Position (Ref: Blue-collar worker)						
Self-Employed	0.048	0.038	0.462	0.351	0.397	0.351
White-collar worker	0.043	0.030	0.093	0.281	0.062	0.281
Civil Service	-0.035	0.047	-0.214	0.408	-0.204	0.397
Autonomy (Ref: Middle level)						
Low	0.045	0.051	-0.246	0.432	-0.375	0.422
Low-Middle	0.061***	0.021	0.212	0.222	0.087	0.221
Middle-High	0.017	0.019	0.086	0.176	0.076	0.173
High	0.025	0.031	0.022	0.346	0.050	0.339
Company Size (Ref.: below 200)						
200-2000	0.003	0.019	0.001	0.194	-0.026	0.190
>2000	-0.034*	0.019	0.100	0.198	0.142	0.196
Male	0.036**	0.017	-0.062	0.161	-0.104	0.157
age	-0.003	0.005	-0.056	0.050	-0.053	0.049
age (sq.)	0.000	0.000	0.000	0.001	0.000	0.001
Family Status (Ref: Single)						
Married	0.012	0.021	0.177	0.194	0.114	0.192
Divorced/Seperated	0.038	0.024	0.785***	0.268	0.652**	0.264
Number of doctoral consultation (last 3 r	0.000	0.002	-0.080***	0.027	-0.082***	0.027
Education (Ref: middle)						
Low	0.015	0.028	0.253	0.295	0.265	0.298
High	0.009	0.020	-0.056	0.178	-0.049	0.173
Number of Persons in HH	-0.006	0.009	0.053	0.095	0.056	0.094
Number of Children in HH	-0.004	0.013	0.023	0.133	0.043	0.132
year (Ref: 2012)						
2013	-0.007	0.019	-0.202	0.190	-0.227	0.188
2014	-0.019	0.019	-0.354*	0.181	-0.338*	0.178
2015	0.017	0.018	-0.332*	0.199	-0.349*	0.197
DRM day (Ref: Wednesday)						
Sunday	-0.033	0.036	-0.719**	0.342	-0.654**	0.327
Monday	0.019	0.021	-0.157	0.205	-0.196	0.202
Tuesday	-0.002	0.022	0.205	0.207	0.196	0.200
Thursday	0.031	0.021	-0.056	0.208	-0.074	0.203
Friday	0.010	0.024	-0.114	0.279	-0.089	0.284
Saturday	0.064	0.041	-0.522	0.815	-0.632	0.766
Reported second activity while working (Ref: no second activity)						
Eating	0.049**	0.020	0.032	0.175	-0.069	0.176
Childcare	-0.088*	0.052	-1.111	1.144	-0.651	1.334
Computer/internet	-0.001	0.050	-1.148	0.943	-1.131	0.851
On the phone	0.019	0.044	0.187	0.533	0.153	0.521
Radio	-0.053	0.079	0.126	0.472	0.152	0.432
Care giving to relatives	-0.041	0.166	-0.741	0.477	-0.659	0.406
Begin to work of first spell (Ref: 8-10 am)						
2-4 am	-0.176	0.110	-1.205*	0.727	-0.969	0.652
4-6 am	-0.072**	0.036	-0.165	0.321	-0.034	0.312
6-8 am	-0.013	0.020	-0.023	0.185	0.044	0.180
10-12 am	0.035	0.033	0.235	0.326	0.242	0.323
0-2 pm	-0.037	0.050	0.358	0.393	0.479	0.383
2-4 pm	0.118***	0.043	-0.402	0.548	-0.534	0.549
4-6 pm	0.092**	0.046	0.359	0.622	0.307	0.606
6-8 pm	-0.030	0.113	-2.502**	0.985	-2.223**	0.943
8-10 pm	0.085	0.070	0.417	0.657	0.437	0.651
Finish with work of last spell (Ref: 4-6 pm)						
6-8 am	0.082	0.082	-1.977	1.309	-1.566	1.207
8-10 am	0.141*	0.076	1.160	0.782	1.063	0.783
10-12 am	0.107**	0.042	-0.216	0.567	-0.319	0.556
0-2 pm	0.070**	0.033	-0.064	0.326	-0.140	0.322
2-4 pm	0.006	0.022	0.175	0.214	0.192	0.210
6-8 pm	-0.027	0.023	0.202	0.226	0.279	0.220
8-10 pm	-0.043	0.036	0.779***	0.282	0.818***	0.278
10-12 pm	-0.045	0.033	0.238	0.365	0.248	0.366
Break during work (Ref.: No)						
1 break	0.036*	0.020	-0.027	0.188	-0.088	0.188
>1 break	0.057**	0.022	-0.127	0.217	-0.178	0.214
Constant	0.709***	0.067	7.627***	0.618	7.082***	0.619
Number of observations	849		849		849	
Pseudo R²	0.025		0.160		0.190	

Source: SOEP-IS 2012-15, own calculations.

Note: The analysis comprises all working spells reported by employed individuals. Duration in work spell in hours. Additionally, second activities as on the way to work, shopping, preparing food, washing oneself, doing housework, resting, relaxing, meditation, watching TV, exercising, taking care of pets, other activities, drinking coffee/tea or drinking alcoholic drinks/smoking and starting to work between 0-2 am or 10-12 pm and finish with work as finish between 0-4 am or 4-6 am and widowed are automatically dropped by only a small number of observations and no variation with these variables.