

Hoang, Thi Truong An; Knabe, Andreas

Working Paper

Social Contacts, Unemployment, and Experienced Well-Being. Evidence from Time-Use Data

CESifo Working Paper, No. 9953

Provided in Cooperation with:

Ifo Institute – Leibniz Institute for Economic Research at the University of Munich

Suggested Citation: Hoang, Thi Truong An; Knabe, Andreas (2022) : Social Contacts, Unemployment, and Experienced Well-Being. Evidence from Time-Use Data, CESifo Working Paper, No. 9953, Center for Economic Studies and ifo Institute (CESifo), Munich

This Version is available at:

<https://hdl.handle.net/10419/265988>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.

Social Contacts, Unemployment, and Experienced Well-Being. Evidence from Time-Use Data

Thi Truong An Hoang, Andreas Knabe

Impressum:

CESifo Working Papers

ISSN 2364-1428 (electronic version)

Publisher and distributor: Munich Society for the Promotion of Economic Research - CESifo GmbH

The international platform of Ludwigs-Maximilians University's Center for Economic Studies and the ifo Institute

Poschingerstr. 5, 81679 Munich, Germany

Telephone +49 (0)89 2180-2740, Telefax +49 (0)89 2180-17845, email office@cesifo.de

Editor: Clemens Fuest

<https://www.cesifo.org/en/wp>

An electronic version of the paper may be downloaded

- from the SSRN website: www.SSRN.com
- from the RePEc website: www.RePEc.org
- from the CESifo website: <https://www.cesifo.org/en/wp>

Social Contacts, Unemployment, and Experienced Well-Being. Evidence from Time-Use Data

Abstract

We use the UK Time-Use Survey 2014/15 to analyze how differences in the frequency and intensity of social contacts contribute to the gap in experienced well-being between employed and unemployed persons. We observe that people generally enjoy being with others more than being alone. The unemployed generally feel worse than the employed when engaging in the same kind of activities, partly because they are more often alone. The unemployed can replace lost work contacts only partially with private contacts. In terms of experienced well-being, however, the small increase in time spent with family and friends (which people enjoy a lot) offsets the loss of work contacts (which people generally enjoy only little). Hence, we do not find that the differences in the social-contact composition between the employed and the unemployed contribute to the difference in their experienced well-being.

JEL-Codes: I310, D910, J600, J220.

Keywords: unemployment, happiness, experienced well-being, time use, social contact, decomposition.

Thi Truong An Hoang
Otto von Guericke University Magdeburg
Faculty of Economics and Management
P.O. Box 4120
Germany – 39016 Magdeburg
thi.hoang@ovgu.de

Andreas Knabe
Otto von Guericke University Magdeburg
Faculty of Economics and Management
P.O. Box 4120
Germany – 39016 Magdeburg
andreas.knabe@ovgu.de
ORCID: 0000-0003-1298-0416

The data used in this study are available in the UK Data Archive with the identifier <http://doi.org/10.5255/UKDA-SN-8128-1>.

1. Introduction

Our study investigates the relationship between time use, social contacts, and experienced well-being of employed and unemployed persons, using data from the UK Time-Use Survey. Our aim is to analyze to what extent differences in the time spent with other people explain differences in the experienced well-being of employed and unemployed persons.

While previous literature has extensively shown the detriment of unemployment to cognitive well-being, measured by, e.g., general mental health or life satisfaction (Clark and Oswald 1994; Winkelmann and Winkelmann 1998; Clark et al. 2001; Knabe and Rätzl 2010; Clark et al. 2010; Shields et al. 2009), the few existing studies which examine how a person's employment status is related to everyday-life emotional experiences suggest that unemployment affects experienced well-being through two channels. On the one hand, the unemployed experience lower levels of well-being than the employed when engaged in the same kind of activities (Knabe et al. 2010; Krueger and Mueller 2012). On the other hand, employed persons rate working among the least pleasant activities during their days (Kahneman et al. 2004; White and Dolan 2009; Bryson and MacKerron 2017; Hoang and Knabe 2021a; Wolf et al. 2022). Since, by definition, the employed have to spend more time working than the unemployed, this worsens their average emotional experience over the course of the day. The first channel has been referred to as a saddening effect of unemployment, and the second as a time-composition effect (Knabe et al. 2010). The two effects work in opposite directions, such that it is not clear, *a priori*, which of the two groups feels better over the entire day. Various studies find that the saddening and time-composition effects offset each other, such that unemployment is not negatively related to day-average experienced well-being (Knabe et al. 2010) and Wolf et al. (2022) for Germany, Flèche and Smith (2017) for France, and Hoang and Knabe (2021a) for the UK). For the United States, Krueger and Mueller (2012) find that the saddening effect dominates when looking at the specific feelings of sadness and pain, while Dolan et al. (2017) do not find differences between aggregate emotional well-being measures of the employed and the unemployed.¹

Various reasons could be responsible for the saddening effect. For example, Krueger and Mueller (2012) suppose that the unemployed could have less income to spend on leisure, that there might be diminishing marginal utility of leisure, or that the unemployed have more time to think about their misery. The saddening effect could also result from various other factors that are generally

¹ See Hoang and Knabe (2021b) for an empirical investigation of the differences between these two studies.

considered to be responsible for the well-being gap between the employed and the unemployed. Employment not only generates income, but it may also provide additional, latent benefits. In her well-known enumeration, Jahoda (1981) lists five latent benefits of work: it externally imposes a time structure on the day, enforces activities, links people to goals and purposes that transcend their own, defines personal identity and social status, and establishes social contacts outside the family. Empirical studies on the relationship between unemployment and subjective well-being support the existence of some of these latent benefits. For example, there is strong evidence that unemployment hurts because it is associated with a loss in social status and a deviation from social norms (Clark 2003; Schöb 2013; Hetschko et al. 2014). There is also evidence that employment links people to transcendental goals. When people are asked about how “meaningful” or “rewarding” their daily activities are, working usually ranks on top (White and Dolan 2009; Wolf et al. 2022).

In this paper, we focus on the hypothesis that the unemployed have less contacts with other people than the employed and that this provides a partial explanation for the well-being loss experienced by the unemployed. There is overwhelming evidence for the important role played by social capital and social connectedness for one’s physical (Zheng et al. 2020; Stavrova and Ren 2021) and mental well-being (Saeri et al. 2018; Helliwell and Putnam 2004). These studies measure subjective well-being using various concepts, e.g. life satisfaction and life-domain satisfaction (Helliwell and Putnam 2004; Winkelmann 2009; Hamermesh 2020; Clair et al. 2021), suicidal ideation (Faria et al. 2020; Gomboc et al. 2022), stress reaction, distress levels, or (risk of) depression (Goodman et al. 2017; Zuelke et al. 2018; Birditt et al. 2021). Sarracino and Piekalkiewicz (2021) investigate the role of social contacts for well-being during the 2008 economic crisis in Europe. Their study indicates that, even though material matters became more urgent during the crisis, social capital did not become any less important to people’s well-being.

There are also some studies looking at how people spend their time and how they experience it depending on the presence of other people. These studies generally support the view that social contacts have positive consequences for emotional well-being. Kahneman et al. (2004) report that socializing and intimate relations rank among the best experiences of the day based on their affect ratings. Bryson and MacKerron (2017), using self-collected data from a smartphone app, also report that people are happiest when they spend time with others, in particular friends or their spouse/partner. This positive effect is, however, diminished when people are working. Gimenez-Nadal et al. (2022) examine how workers perceive time alone and time spent with family members,

using American and British time-use data. Their findings show that respondents prefer togetherness over solo leisure activities.

While social capital evidently plays an important part in predicting both cognitive and affective well-being, prior literature shows that jobless people generally have less social contact. The unemployed have been found to often withdraw from social participation (Brand and Burgard 2008; Paugam and Russell 2000; Dieckhoff and Gash 2015; Gallie et al. 1994). They belong to disadvantaged socioeconomic groups who are at risk of social isolation and have less social contact (Simone et al. 2021; Burchardt et al. 1999; Röhr et al. 2021). They suffer from the negative implications and the cumulated disadvantages of being unemployed (Gangl 2006), the feeling of shame and stigmatization (McFadyen 1995; Eales 1989; Paugam and Russell 2000; Peterie et al. 2019b), and the perception of unemployment as their own fault (Lister et al. 1996; Peterie et al. 2019a). Furthermore, the literature suggests that the unemployed are caught in a vicious circle: their vulnerability to social isolation reinforces their economic disadvantages (Gallie 1999), which in turn increases their risk of social isolation further (Eckhard 2018).

In most studies, the intensity of social participation has been measured by a range of broad social indicators, for instance, how frequently one attends cultural events, how often one visits friends and relatives, or the number of friends and social contacts one has. Such measures and indicators have the advantage of capturing the frequency or magnitude of different types of social participation over longer periods of time. However, they do not reflect the time intensity (length) and the quality (pleasantness) of the social contacts. Furthermore, while work may provide more opportunities to establish social contacts, employed persons are also more time-constrained, since they cannot spend much time with others outside the workplace, as well as more choice-constrained, since they typically do not choose their contacts at work. The unemployed, in contrast, might have a smaller number of contacts outside their household, i.e. a lower contact frequency, but more time to allocate to their existing contacts, i.e. a higher contact intensity, and in principle more freedom to shift their available time towards people whose company they enjoy. The study by Paugam and Russell (2000) reveals that the unemployed participate less in formal socializing (clubs, organizations, institutions), but have higher levels of informal social participation (friends, family, etc.) in several countries.

Our study exploits data from the UK Time-Use Survey which contains rich information on how people spend their time, how much time they spend with different types of social contacts, and how they feel during these episodes. We focus specifically on the differences in time-use and

experienced well-being between employed and unemployed persons. We measure the intensity of a person's contacts by calculating the share of the total waking time the person spends being with other people and being alone. The quality is then measured by the level of enjoyment a person perceives while spending time with these contacts. In line with the literature, we find that the unemployed feel worse than the employed during many types of non-work activities, but that the employed report particularly little enjoyment during work episodes. On average, the unemployed do not enjoy their days less than the employed.

We develop a decomposition technique to quantify the extent to which the contacts to family members and to others outside the household contribute to the experienced well-being of employed and unemployed persons. We identify five separate components that illuminate the role of differences in the composition of activities and social contacts as well as differences in enjoyment ratings in particular activity-contact-combinations. The opportunities to have contacts with other people generally differ depending on the marital/partnership status of a person. Thus, we conduct separate analyses for persons who are married or cohabiting, henceforth “partnered”, and persons who have never been married, or are divorced or widowed, henceforth “single”.²

Our analysis shows that the employed and the unemployed enjoy being with others more than being alone. Unemployment deprives people of the opportunity to meet others at work. Hence, the unemployed spend, on average, over two waking hours longer alone than the employed. This supports the claim by Jahoda (1981) that access to social contacts outside the family is one of the latent benefits of working.

At the same time, our results suggest that the observed differences in activities and social contacts do not lead to a lower level of experienced well-being among the unemployed. With respect to the activity composition, the unemployed benefit substantially from being able to shift time from working to other, more enjoyable activities. When looking at their social contacts, we find different results for single and partnered persons. For people with partners, meeting others at work does not seem to provide additional enjoyment compared to working alone. We also do not observe significant differences in the amount of time spent with others outside of work between partnered employed and unemployed persons. Hence, differences in the availability of social contacts do not contribute to the differences in experienced well-being between the employed and the

² In this paper, we use the terms “partnered”, “married/cohabiting” and “with partner” interchangeably for the subgroup of individuals who declare to be married or cohabiting, and at the time of the survey are living with their partner.

unemployed. The singles, in contrast, enjoy spending their work time with others significantly more than working alone. This benefit is lost when becoming unemployed. However, we also observe that single unemployed persons spend more time with others outside work than employed singles. This partially offsets the well-being reduction from losing work contacts, such that we do not find a significant overall contribution of changes in social contacts to the well-being differences of employed and unemployed singles, either. These findings cast doubt on whether the observation that employed persons have more social contacts outside their own household should really be considered a latent benefit of work.

The paper is structured as follows. In the next section, we describe the data. In section 3, we examine differences in time use, social contacts, and well-being between the employed and the unemployed. In section 4, we decompose these differences in various channels. Section 5 concludes.

2. Data

We analyze data from the 2014/2015 wave of the United Kingdom Time-Use Survey (UKTUS). The UKTUS is a nationally representative survey that collects information on how people use their time (Gershuny and Sullivan 2017). Respondents complete tabular diaries of up to two days in which they provide detailed information about what activities they engaged in and where they sojourned at each point in time during the day. Of particular relevance for this study are two additional pieces of information collected in the survey. First, respondents reveal whom they were with during each reported episode (spouse/partner, parents, children, other household members, other known persons, or being alone), so we have detailed information on the types, frequencies, and timing of their social contacts. Second, a subsample of these respondents are asked to rate – on a scale from 1 (“not at all”) to 7 (“very much”) – how much they enjoyed each of the reported activities. We interpret this response as a measure of a person’s affective/experienced well-being. Respondents in this survey provide diaries for two separate days. The exact days on which respondents should fill out the diaries are randomly determined. In general, one is a weekday and the other one is either a Saturday or a Sunday. In total, the dataset contains 16,550 diaries collected from 9,388 individuals, aged 8 or older, living in 4,239 households.

Our analysis focuses on how differences in the frequency and type of social contacts contribute to the well-being gap between the employed and the unemployed. How many opportunities a person has to be in contact with others might not only depend on their employment status, though, but is

also heavily influenced by their partnership status (Röhr et al. 2021). Married or cohabiting persons have much more social contact “by default” (with their partner), whereas singles have to actively seek contact if they do not want to be alone in their free time. To account for this important difference, we conduct our analyses separately for married/cohabiting persons and singles. We thus restrict the sample to the subsets of respondents of whom we know that they are either married/cohabiting or single (never married/divorced/widowed) based on their self-reported marital status. Furthermore, we use available data about how different members of the household are related to validate the consistency of the actual living arrangement and the reported marital status. If a conflict is detected (e.g. when a respondent answers to be single when asked about her relationship status but in another question reports to be the partner of another household member), the observation is removed from the sample.

Table 1: Descriptive Statistics

		Married/Cohabiting		Single	
		Employed (1)	Unemployed (2)	Employed (3)	Unemployed (4)
<i>Mean</i>					
Age		44.10 (0.29)	41.47 (2.09)	36.84 (0.56)	35.35 (1.66)
Number of Children in Household		0.74 (0.03)	0.91 (0.23)	0.25 (0.03)	0.33 (0.07)
Number of Household Members		3.21 (0.04)	3.33 (0.25)	2.51 (0.07)	2.18 (0.16)
Monthly Household Income (in GBP, OECD equivalence scale)		2143 (80.86)	1308 (327.78)	1947 (140.22)	743 (88.39)
Weekly Working Hours in Main Job		36.02 (0.26)	- -	35.09 (0.45)	- -
Life Satisfaction Level		7.81 (0.04)	6.56 (0.30)	7.18 (0.09)	5.94 (0.33)
Number of Diary Episodes		37.21 (0.25)	39.35 (1.96)	35.22 (0.46)	31.44 (1.57)
Episode Duration (minutes)		38.70 (0.26)	36.59 (1.82)	40.89 (0.54)	45.81 (2.29)
<i>Shares (in %)</i>					
Gender	Male	53.80	47.94	48.91	62.33
	Female	46.20	52.06	51.09	37.67
Highest Qualification	Degree/Higher Education	52.17	39.95	49.82	33.87
	A-Level/Equivalent	17.51	28.34	23.86	17.42
	Secondary	24.06	19.73	20.49	36.16
	No Degree	6.26	11.97	5.83	12.55
Number of Individuals		2499	56	869	68
Number of Diaries		4960	111	1720	132
Number of Episodes		184756	4368	60588	4172

Notes: Standard errors in parentheses. All observations are weighted using the individual weights provided by UKTUS.

The UKTUS contains various information about a person's self-declared work status, their labor market history as well as future work intentions. We apply the ILO definition to identify employed and unemployed persons. To be considered employed, a person has to be at least 16 years old and report to have been in paid work in the seven days ending the Sunday preceding the interview or is holding a job from which he/she was taking time off at the time of the interview. Unemployed persons are those who are at least 16 years old, have not been working for pay in the seven days ending the Sunday preceding the interview, are not just temporarily away from a job or business, have been searching for jobs in the four weeks preceding the interview, and would be able to start working immediately when given a job offer. We include both full-time and part-time employees, while excluding individuals who fit the ILO criteria of being unemployed but also report to be full-time students. To avoid an undue influence of outliers, individuals whose equalized income belongs to the top and bottom 1% of the distribution are removed from the analyses. Finally, since we analyze the role of social contacts for individual well-being, we exclude diaries containing enjoyment scores for fewer than three waking episodes. As each respondent is expected to complete two diaries, there are cases where only one of the two diaries contains enjoyment ratings for at least three waking episodes. In such cases, this diary will be kept in the sample, while the other diary (with fewer than three enjoyment-rated episodes) is removed. All the diaries contain complete time-use information.

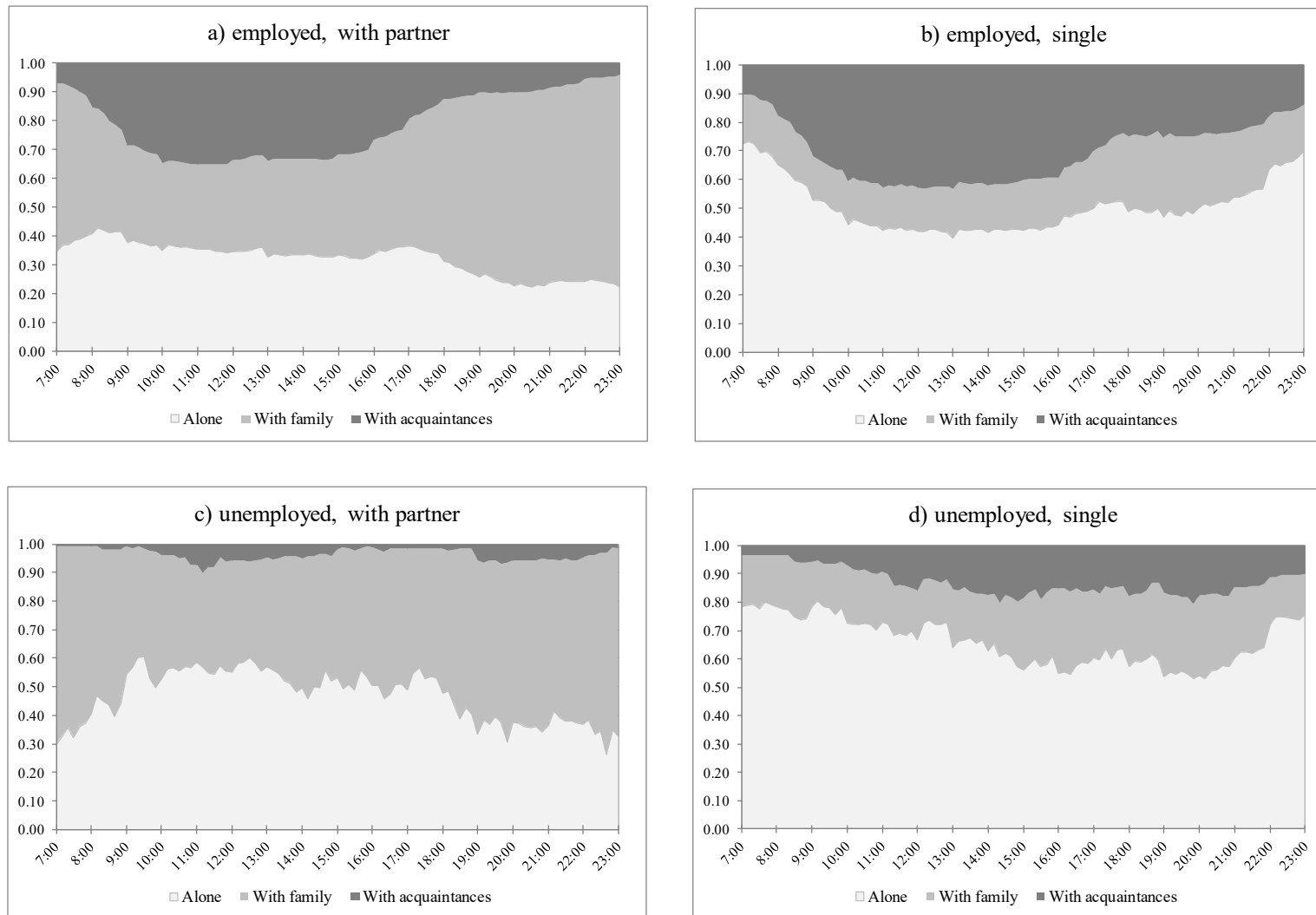
After these adjustments, we obtain a sample of 3,492 individuals who report 6,923 diaries with sufficient enjoyment information. The sample includes 2,555 married/cohabiting persons (2,499 employed and 56 unemployed with 4,960 and 111 diaries, respectively) and 937 single persons (869 employed and 68 unemployed with 1,720 and 132 diaries, respectively). As mentioned earlier, some diaries might be incomplete in the sense that they contain seamless sequences of activities, but missing enjoyment scores for some of these activities. This concerns roughly ten percent of observations (22,370 out of 224,490 waking episodes, in total). These episodes can be used to analyze time use, but not well-being. One important aspect of UKTUS 14/15 is that all members of the same household report on the same diary days. This allows imputing some missing observations of co-present (family) contacts. For example, if a husband's diary has missing information on co-present persons during some time interval on a diary day (so he neither reports any contacts nor being alone), while the diary of his wife reports at that exact time of the day that she was with her husband, the missing contact information for that episode in the husband's diary would be imputed as "with spouse". There are 24,698 waking episodes with missing co-present contact information in our research sample, out of which 5,594 episodes can be imputed with this

method. If no further information can be acquired about episodes with missing social-contact information, they are classified as being alone. This is a conservative assumption. If these episodes were actually spent with someone else, and we see that joint activities are generally rated better, the average enjoyment of episodes spent alone would be biased upwards and the well-being gap between being alone and being with contacts would appear smaller than the actual gap. Unless stated otherwise, we apply the diary weights provided by the UKTUS which match the distribution of age, gender, and region of residence of respondents in the UKTUS to that of the entire UK population. These weights also produce a uniform distribution of months of the year and days of the week.

Table 1 shows descriptive statistics of employed and unemployed persons in the subgroups of married/cohabiting and single (never married/divorced/widowed) persons. For both subgroups, the employed are around two years older, earn substantially higher net household income, and have higher levels of life satisfaction than the unemployed. A larger share of the employed have obtained a university degree or attended higher-education institutions than of the unemployed. Roughly two-thirds of the employed are married/cohabiting in comparison to less than half of the unemployed. A more differentiated comparison by partnership status shows that, among the married/cohabiting, the unemployed tend to live in larger household with more children than the employed. Among the singles, employed persons report a larger average household size but fewer children in the household. There are more employed men than employed women, but more unemployed women than unemployed men in the married/cohabiting subgroup. For singles, the exact opposite holds where men account for almost two-third of all individuals without a job. Our sample supports previous findings in the well-being literature that being married and holding a job bring significantly more satisfaction to people's lives. Persons who are employed and married/cohabiting rate their level of life satisfaction highest (7.81), whereas the lowest life satisfaction (5.94) is reported by unemployed singles.

Partnered persons and singles also differ in various other demographic and socioeconomic characteristics, and so do the employed and unemployed within each subgroup. Compared to singles, married/cohabiting persons are generally older, live in larger households with more children, and have higher incomes. These differences illustrate that the opportunities for being with other people in daily life might be very different and demonstrate the need for separate analyses of these two subgroups.

Figure 1: Social contacts over the course of the day, by employment and partnership status



Source: UK TUS, own calculation

3. Differences in time use and well-being between the employed and the unemployed

3.1. Social contacts over the course of the day

In this subsection, we present descriptive evidence on how the prevalence of social contacts changes over the course of the day. Figures 1(a) to 1(d) illustrate the share of time the employed and the unemployed spend, on average, with social contacts (family members incl. all persons living in the same household, other acquaintances) or alone between 7am and 11pm.³ In Figure 1, we divide the time interval into successive 10-minute slots and calculate, for each time slot, the share of respondents who report spending time alone, with household members, or with others from outside the household. When a person spends time with family and non-family members simultaneously, the episode is treated as spending time with family, i.e. the episode is treated primarily as a family activity.⁴ Consequently, the three categories presented in Figure 1 are mutually exclusive and exhaustive.

The four diagrams show that the overall extent as well as the structure of time that individuals allocate to different contacts in everyday life differs across employment and partnership categories. Employed persons spend a relatively large share of time with non-family acquaintances. For partnered persons, these contacts occur mainly between 9am and 5pm, so many of these are most likely work contacts (colleagues, customers, superiors, etc.). In the evening, the share of time spent with family members increases substantially for this group, whereas there is a drop of approximately 20% in contacts to others. Employed singles also meet others mostly during the day, but continue to meet other acquaintances (likely personal friends) also in the evening. Single and partnered employed differ strongly in the extent of time they spend alone. Among the employed with a partner, about 40% are alone at each point of time during the day, but only about one-fourth is alone in the evening. Single employed persons are not more often alone during the day, but more than two-thirds do not have contact with others in the early mornings or evenings.

The contact structure is very different for unemployed people. Unemployed persons with partners spend a rather small share of time only with non-family acquaintances. Instead, they spend more time with family members, but also more time alone. Single unemployed individuals spend about

³ We present separate figures for weekdays and weekends in the appendix.

⁴ We also conducted our analyses based on four contact categories where we differentiated between 1) alone, 2) only with family members, 3) with family member and acquaintances from other households, and 4) only with acquaintances from other households. This did not affect any of our main findings.

two-thirds of their entire day alone and meet others mainly in the late afternoons and early evenings.

Overall, our results show that married/cohabiting people spend a larger share of time with family members than singles. The singles tend to socialize more with other acquaintances (without other family members present). Working hours appear to shape the contact profile of time-use over the course of the day, not only for employed but also for unemployed persons. During those times of the day when the employed can spend time with work contacts, the unemployed are deprived of many opportunities to meet others. The unemployed are more often alone in the hours when other people are working or attending school, and less alone in the evening. Despite having more free time to allocate to other social contacts when not working, the unemployed do not seem to be able to completely replace the loss of social contacts at the workplace.

Table 2: Time use (minutes) and enjoyment by employment status, types of activity and social contacts

		Employed persons								Unemployed persons							
		Time use (minutes)				Enjoyment				Time use (minutes)				Enjoyment			
		Alone	With family	With others	Total	Alone	With family	With others	Avg. Enjoyment	Alone	With family	With others	Total	Alone	With family	With others	Avg. Enjoyment
Married/cohabiting	Total waking time	311	421	215	947	4.98	5.64	4.93	5.27	432	428	35	896	5.00	5.53	5.85	5.31
		(6)	(6)	(5)	(2)	(0.03)	(0.02)	(0.04)	(0.02)	(41)	(39)	(9)	(15)	(0.18)	(0.15)	(0.29)	(0.15)
	<i>of which:</i>																
	Contracted time	114	30	166	310	4.58	4.73	4.64	4.63	-	-	-	-	-	-	-	-
		(4)	(2)	(5)	(5)	(0.05)	(0.09)	(0.05)	(0.04)								
	Non-work time	198	391	48	637	5.18	5.70	5.85	5.56	432	428	35	896	5.00	5.53	5.85	5.31
		(4)	(6)	(2)	(5)	(0.03)	(0.02)	(0.04)	(0.02)	(41)	(39)	(9)	(15)	(0.18)	(0.15)	(0.29)	(0.15)
	<i>of which:</i>																
	Committed time	66	107	11	185	4.77	5.28	5.45	5.11	180	118	11	309	4.34	4.96	5.29	4.64
		(2)	(3)	(1)	(3)	(0.04)	(0.03)	(0.09)	(0.03)	(23)	(19)	(3)	(25)	(0.22)	(0.38)	(0.49)	(0.26)
Single	Necessary time	67	122	17	206	5.13	5.68	5.74	5.52	114	129	8	251	5.44	5.74	5.99	5.63
		(2)	(2)	(1)	(3)	(0.03)	(0.03)	(0.06)	(0.02)	(16)	(13)	(2)	(16)	(0.25)	(0.15)	(0.33)	(0.15)
	Free time	64	162	20	246	5.69	6.01	6.15	5.94	138	182	17	337	5.53	5.83	6.14	5.72
		(2)	(3)	(1)	(3)	(0.04)	(0.02)	(0.05)	(0.02)	(19)	(24)	(7)	(28)	(0.20)	(0.13)	(0.34)	(0.13)
	Total waking time	452	175	307	934	5.21	5.73	5.27	5.34	575	191	139	904	5.46	5.54	6.31	5.60
		(11)	(9)	(9)	(5)	(0.05)	(0.05)	(0.06)	(0.04)	(33)	(26)	(22)	(15)	(0.13)	(0.16)	(0.17)	(0.11)
	<i>of which:</i>																
	Contracted time	113	23	190	326	4.52	4.92	4.77	4.70	-	-	-	-	-	-	-	-
		(6)	(3)	(7)	(8)	(0.10)	(0.17)	(0.08)	(0.07)								
	Non-work time	339	151	117	607	5.41	5.83	6.04	5.65	575	191	139	904	5.46	5.54	6.31	5.60
		(9)	(9)	(5)	(8)	(0.04)	(0.06)	(0.05)	(0.03)	(33)	(26)	(22)	(15)	(0.13)	(0.16)	(0.17)	(0.11)
	<i>of which:</i>																
	Committed time	79	38	20	138	4.90	5.43	5.62	5.16	130	62	37	228	5.07	4.88	6.62	5.24
		(3)	(3)	(2)	(4)	(0.07)	(0.09)	(0.08)	(0.05)	(17)	(13)	(12)	(24)	(0.18)	(0.25)	(0.15)	(0.16)
	Necessary time	116	51	39	206	5.32	5.78	5.96	5.57	141	45	34	220	5.43	5.52	6.33	5.59
		(4)	(3)	(2)	(4)	(0.05)	(0.06)	(0.05)	(0.04)	(13)	(7)	(8)	(14)	(0.15)	(0.20)	(0.24)	(0.14)
	Free time	144	63	58	264	5.80	6.12	6.24	5.98	304	84	68	455	5.64	6.04	6.16	5.80
		(5)	(4)	(3)	(5)	(0.05)	(0.07)	(0.06)	(0.04)	(30)	(14)	(13)	(28)	(0.17)	(0.15)	(0.22)	(0.14)

Notes: Standard errors in parentheses. Contracted time - working and work-related activities; committed time - activities related to fulfilling duties; necessary time - personal care, eating, etc; free time - activities related to leisure

3.2. Time use, social contacts, and enjoyment

In this subsection, we investigate in more detail how much time employed and unemployed people spend on different activities, how often they are with others or alone, and how much they enjoy their time. We categorize daily activities following the classification introduced by Dagfinn (1978). This approach organizes the wide range of activities into four big categories: contracted time, committed time, necessary time, and free time. Contracted time covers activities related to working for income, e.g. working in the main job or traveling for work/business. Committed time refers to performing duties, e.g. childcare or home production. Necessary time refers to activities that must be done to maintain and support daily life, e.g. personal care or eating. Finally, free time includes all hobbies as well as entertaining/relaxing activities. Dagfinn's simple classification system has been widely recognized in the area of time-use research (e.g. Spinney and Millward 2010; Williams et al. 2016; cf. United Nations 2016).

Table 2 summarizes how the employed and the unemployed spend and enjoy their waking time, differentiated by relationship status and the presence of social contacts. The results show that time use and enjoyment ratings vary substantially between individuals with different employment and partnership statuses.

The employed spend about one-third of their time on work-related activities (contracted time). Within the married/cohabiting subgroup, the unemployed tend to devote more time than the employed to performing duties (+2h), but also more time to leisure (+1.5h). The unemployed spend most of the additional time in these activities alone. While we observe a slightly larger amount of time that partnered unemployed spend with family members in non-work activities compared to employed persons (428min vs 391min), the amount of time they spend with others outside their family seems to be a little smaller (35min vs 48min). However, neither of these differences is statistically significant, so that we cannot reliably conclude that there are differences in the time employed and unemployed persons with partners spend with others in their non-work time.⁵ Among single individuals, we also observe that the unemployed allocate more time to committed activities than the employed (+1.5h), but the largest difference occurs in leisure time (+3h). Most of this additional time (50min and 2h 40min, respectively) is spent alone. Hence, as for the married/cohabiting, unemployed singles spend the time that the employed spend working on

⁵ It is worth mentioning that, while married/cohabiting employed and unemployed persons do not differ significantly in the absolute amount of time spent with family, the share of this time over their total waking time is significantly different (because the unemployed sleep more).

various other activities, but they are mostly alone. While we observe that unemployed singles spend, on average, 40 minutes more with family members and 22 minutes more with other acquaintances in non-work activities than the employed, neither of these differences is statistically significant. We do find a statistically significant difference when we combine both categories, though ($p < .05$). Overall, despite being able to allocate their time freely, the unemployed do not seem to spend substantially more time with family and acquaintances than the employed do in their non-work time, implying that their lost work contacts are not fully replaced by spending more time with others. In that sense, our results support Jahoda's (1981) hypothesis that being unemployed causes a loss of social contacts.

When we compare the married/cohabiting group to the singles, we find that having a partner is associated with more time spent with household members, less time alone, but also less time solely spent with others who are not from one's own household. Among all subgroups, employed persons with partners exhibit the smallest amount of time spent alone, while unemployed persons with partners allot the least time to meeting and doing things exclusively with people that are not from their family. Comparing the daily activities of the married/cohabiting and the singles, we find that the former generally devote more time to committed activities, for example home management and childcare, while the latter spend more time on leisure.

When examining self-reported enjoyment levels, we find (perhaps unsurprisingly) that individuals enjoy their leisure time more than working or fulfilling other responsibilities. For any activity, doing it alone is less enjoyable than doing it together with other people, be they family members or other acquaintances. When employed, spending time with others during working time is perceived as better than working alone (although the difference is not statistically significant for married/cohabiting persons). Nevertheless, average enjoyment during work episodes with others is still lower than average enjoyment during non-work activities, even when the latter are performed alone. Regardless of employment and partnership status, individuals tend to report their highest enjoyment when engaging in non-work activities solely with non-household acquaintances, and their lowest scores when performing activities alone. Partnered unemployed persons spend the most time, and also the most time alone, of all subgroups on committed activities, yet they rate this time worst for their experienced well-being. Unemployed singles allot about half of their time to leisure, and enjoy it very much. Although they more often have to spend their free time alone, which is less pleasurable than free time with family and acquaintances, it still delivers more pleasant experiences than other types of activities.

The well-being literature has found evidence that unemployment produces stigma and shame. The results in this analysis can be interpreted as preliminary evidence that these negative psychological effects of unemployment are visible in the cognitive dimension of well-being (life satisfaction), while they do not seem to affect unemployed people's ability to enjoy their time and their contacts with other people in everyday life. We do not see that unemployed people would withdraw from their social contacts or that they were unable to enjoy meeting with others. Quite to the contrary, the unemployed enjoy spending time with others very much. The time spent with other acquaintances even belongs to the most enjoyable moments of their day. Hence, we do not find evidence that the unemployed would be less able than the employed to enjoy the time they spend with others. Our time-use investigation shows, however, that they are not able to replace most of the social contacts they lose at work with additional contacts to family members or acquaintances in their non-work time.

4. Decomposing the well-being differences of employed and unemployed persons

In the previous section, we have illustrated that the main reason why the unemployed spend, on average, more time alone than the employed is because they lose contact to other people at work which cannot adequately be replaced by other contacts during non-work activities. We also observe that both the unemployed and the employed generally enjoy any kind of activity more if it is not done alone, but together with others. This suggests that part of the saddening effect of unemployment, i.e. the observation that the unemployed have lower experienced well-being than the employed even when both engage in the same kind of activities, might be explained by the fact that the unemployed are more often alone in these activities. In this section, we explore this hypothesis in more detail and examine to which extent the loss of social contacts at work and its partial replacement by other contacts can explain the differences in duration-weighted experienced well-being between the employed and the unemployed.

As a starting point, we first decompose the well-being difference between the employed and the unemployed into a *time-composition effect* and a *saddening effect* (two-step decomposition). Then, we break down these effects further by taking differences in the prevalence of social contacts into account. This leads to a five-step decomposition of the difference in experienced well-being between the employed and the unemployed, capturing differences in the composition and duration of activities, the composition and frequency of social contacts, as well as the ratings of experienced well-being. In the following subsections, we first reproduce the two-step decomposition and then describe and conduct the five-step decomposition. In the last subsection, we test the robustness of

our findings when we reweight the data using entropy balancing, which makes the subsamples of employed and unemployed persons more similar in terms of relevant covariates.

4.1. Two-step decomposition

Table 3 contains the results of the two- and five-step decompositions, separated by relationship status (married/cohabiting on the left, single on the right). The first line in the table shows the average enjoyment of partnered and single employed persons (5.263 and 5.325, respectively). To determine the time-composition effect, we hypothetically reallocate the time use of an average employed person to different activities such that it matches that of the average unemployed, while the enjoyment levels in each type of activities remain unchanged. This shift would result in a large and statistically significant increase in experienced well-being (+0.271 for the partnered, +0.339 for the singles). This illustrates that the opportunity to use one's time freely instead of having to work could, as such, be beneficial for well-being.

However, the unemployed generally do not enjoy their free time as much as the employed. The saddening effect captures how day-average enjoyment of employed and unemployed persons differs, given that they could spend their time in the same way. For the married/cohabiting, our results show that this would lead to a large and statistically significant reduction in enjoyment (-0.226). The time-composition and saddening effects offset each other, such that we do not find a statistically significant difference in day-average enjoyment between employed and unemployed persons with partners. For the singles, the saddening effect is much smaller and not statistically significant. Hence, average enjoyment is significantly larger for unemployed than for employed singles.

Table 3: Two-step and five-step decompositions with social contacts

Married/cohabitating		Single	
Average employed person			
"Time-composition effect"	5.263 (0.019)		5.325 (0.034)
	-0.016 (0.011)	Contact loss at work	-0.058 *** (0.022)
	5.247 (0.022)		5.266 (0.041)
	+0.271 *** (0.025)	Activity-composition effect	0.329 *** (0.041)
	5.434 (0.031)		5.596 (0.041)
	0.099 *** (0.007)	Contact gain in non-work activities	0.068 *** (0.008)
	5.534 (0.028)		5.664 (0.038)
"Saddening effect"	-0.080 *** (0.018)	Contact shift when unemployed	-0.033 * (0.017)
	5.454 (0.037)		5.631 (0.039)
	-0.226 * (0.125)		-0.056 (0.130)
	-0.146 (0.122)	Adjusted saddening effect	-0.023 (0.130)
Average unemployed person			
	5.307 (0.126)		5.608 (0.122)

Notes: Standard errors from bootstrapping with 5000 replications in parentheses. Significance level: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

4.2. Five-step decomposition

Using the information with whom people spend each episode, we further decompose the observed well-being differences to illuminate the role of social contacts in explaining the well-being gap between employed and unemployed people.

Let $s_{i,j}^k$ be the average share of waking time that individuals in group $k \in \{E, U\}$ (where E and U denote employed and unemployed persons, respectively) spend in activity $i \in \{1, \dots, I\}$ with

contacts $j \in \{a, f, o\}$ (denoting alone, family, and others, respectively). The total share of time that an average individual in group k spends in activity i is then given by $s_i^k = \sum_{j \in \{a, f, o\}} s_{i,j}^k$, with $\sum_{i=1}^I s_i^k = 1$ for each $k \in \{E, U\}$. Let activity $i = 1$ be contracted time (“work”) and activities $i \geq 2$ be all non-work activities. The average enjoyment experienced by individuals of group k in activity i with contact j is denoted by $\varepsilon_{i,j}^k$.

As in the two-step composition, we start with a representative employed person whose enjoyment ratings and share of time use by activities and social contacts reflect the average of all employed persons in the sample (first line in Table 3), which is given by

$$\sum_{i=1}^I \sum_{j \in \{a, f, o\}} s_{i,j}^E \varepsilon_{i,j}^E \quad (1)$$

In the first step, we are interested in the importance of meeting other people at work for individual well-being. We calculate how the average enjoyment of an employed person would change if she supposedly had to spend her entire working time alone (*contact loss at work*). To do so, a hypothetical person is constructed whose episodes with contacts at work are treated as work episodes alone. The experienced well-being would then be

$$s_1^E \varepsilon_{1,a}^E + \sum_{i=2}^I \sum_{j \in \{a, f, o\}} s_{i,j}^E \varepsilon_{i,j}^E \quad (2)$$

As can be seen in Table 3, the reduction of time spent with contacts at work does not seem to change the day-average enjoyment of married/cohabiting people. For the singles, however, we do find a negative and statistically significant effect (-0.058). This contrast suggests that work contacts are more important for singles, perhaps because they need to actively socialize in non-work time if they want to spend time with someone else, but less so for the married/cohabiting who, by default, have immediate access to private contacts in daily life.

The second step of the decomposition identifies an *activity-composition effect*. While the employed have to work, the unemployed can choose more freely what activities they engage in over the day. We examine what would happen to the average experienced well-being if the person constructed in the previous step, who spent all working hours alone, could shift this time to non-work activities, but would still have to engage in them alone. For this decomposition, we assume that, after this shift, the total share of time in each activity corresponds to the average observed among the unemployed. We maintain the time shares spent with family and others at the average

level of the employed, and treat the residuals as time spent alone.⁶ The experienced well-being would then be

$$\sum_{i=2}^I [(s_i^U - \sum_{j \in \{f,o\}} s_{i,j}^E) \varepsilon_{i,a}^E + \sum_{j \in \{f,o\}} s_{i,j}^E \varepsilon_{i,j}^E] \quad (3)$$

This change in the activity composition results in a statistically significant increase in enjoyment, which is also the single-largest channel we identify in our five-step decomposition (+0.187 for partnered people, +0.329 for singles). Our result suggests that it is the type of activities that people engage in that matters most for their experienced well-being. One can also see that the activity-composition effect is much stronger for singles than for married/cohabiting persons. As seen in the previous section, single unemployed persons engage a lot more in free-time activities, while partnered ones devote more to committed time. Since leisure is generally more enjoyable than other kinds of activity for individuals of all considered subgroups, this might explain why the activity-composition effect is much larger for singles than partnered individuals.

At this point in our decomposition, the hypothetical employed person has shifted all working hours to non-work activities and assumedly spends the additional non-work time alone. However, this employed person might want to use some of the additional time to meet other people. The third step restores the relative contact distribution of the employed within each activity, but applies it to the total share of time spent by the unemployed on this activity. The experienced well-being then becomes

$$\sum_{i=2}^I \sum_{j \in \{a,f,o\}} \frac{s_{i,j}^E}{s_i^E} s_i^U \varepsilon_{i,j}^E \quad (4)$$

The well-being effect of this (potential) *contact gain in non-work activities* is positive and statistically significant for both groups. Since time with others is generally perceived as more enjoyable than time alone, an increase in the amount of time spend with others leads to more enjoyment. We find a larger effect for the partnered group (+0.099) in comparison to the singles (+0.068), perhaps because living with a partner generally enhances the availability of social contacts, in particular from one's own household and from a spouse's circle of friends.

The first three steps of the five-step decomposition jointly constitute the time-composition effect of the two-step decomposition. The time-composition effect captures the hypothetical well-being change that would arise if employed people could shift their working time to non-work activities,

⁶ In our data, the residual is positive for all non-work activities, i.e., $s_i^U - \sum_{j \in \{f,o\}} s_{i,j}^E > 0 \forall i \geq 2$.

but maintain their average enjoyment levels in each kind of activity. Formally, this corresponds to an experienced well-being of $\sum_{i=2}^I s_i^U \varepsilon_i^E$, which is the same as the one in equation (4) since $\varepsilon_i^E = \sum_{j \in \{a,f,o\}} (s_{i,j}^E / s_i^E) \varepsilon_{i,j}^E$. In the five-step decomposition, we decompose this change into a part that is attributable to the pure change in types of activities and another part that can be attributed to the differences in the prevalence and types of social contacts people have in these activities. Our results suggest that both partnered and single people benefit from having to spend less time working. The contact effects, however, differ between the two groups. For those with partners, losing contacts at work does not matter much for well-being, but the potential ability to spend more time with friends and family in the gained non-work time could have a positive and statistically significant impact on well-being. Combining both effects shows that the latter significantly dominates the former effect. Singles lose enjoyment when they cannot meet other people at work anymore. They also benefit from the potential enhancement of private contacts. Both effects are of similar magnitude but operate in different directions, such that the combined effect is not statistically different from zero.

We now turn to steps 4 and 5, which further decompose the saddening effect of the two-step decomposition. In step 3, we assumed that the contact composition in the additional non-work time could be the same as that in the actually observed non-work time (i.e., for each activity i we imposed the shares $s_{i,j}^E / s_i^E$ on the entire time share s_i^U). For various reasons, this might not be the case. Potential contacts, i.e. family and friends, might not be available during the daytime or the unemployed might not want to meet other people as much. In either case, the contact composition of an actual unemployed person might not be the same as that of the hypothetical employed person with a fully flexible schedule postulated in step 3. Hence, the fourth step applies the actual contact distribution of the unemployed, such that experienced well-being is

$$\sum_{i=2}^I \sum_{j \in \{a,f,o\}} s_{i,j}^U \varepsilon_{i,j}^E \quad (5)$$

This reflects the enjoyment change that would take place if the prevalence of social contacts would correspond to its actual values among the unemployed. This fourth step (*contact composition when unemployed*) shows that both groups would experience significantly lower average enjoyment than hypothesized in step 3. This suggests that the unemployed suffer from a contact loss in the sense that they cannot enjoy their day as much as they would if they could combine the more advantageous contact structure of an employed person with the time availability of the unemployed.

In the fifth and last step, we now account for the differences in the enjoyment that employed and unemployed people perceive even if both are performing the same kinds of activities and have the same kinds of social contacts. When assigning the actually observed enjoyment level of unemployed people to the hypothetical person constructed in step 4, we arrive at the actual average of unemployed persons in the sample whose day-average well-being is given by

$$\sum_{i=2}^I \sum_{j \in \{a, f, o\}} s_{i,j}^U \varepsilon_{i,j}^U \quad (6)$$

The change in average enjoyment obtained in this last step can be referred to as an adjusted saddening effect. It is the original saddening effect from the two-step decomposition, but cleansed of the impact of changes in the composition of social contacts. Even though the point estimates of this effect are sizable (especially for the married/cohabiting group), neither of the two estimates is statistically significant. Hence, we do not find evidence that the unemployed experience lower average enjoyment than the employed when engaging in the same kind of activities once we take differences in the time-structure of their activities and social contacts into account (although we also cannot claim that there are no such well-being losses).

Summing up, the extended decomposition shows that the most important driver of the gap in experienced well-being between the employed and the unemployed is the difference in how they allocate their time to different types of activities. The more time individuals spend on leisure, the more they enjoy their days on average. This also explains why the unemployed without partners, who allocate the largest share of time to leisure among the four groups, have the highest day-average enjoyment score, even though they report the lowest life satisfaction. Interestingly, while there are substantial differences between the employed and the unemployed regarding who they meet during the day and for how long, these differences in social contacts contribute only little to the total well-being gap. When looking at single and partnered persons separately, we find that married/cohabiting people do not enjoy contacts at work very much, so they do not seem to suffer when losing them due to unemployment. Even though they would benefit if they used the additional time to meet other people, we do not see an increase in the amount of non-work time they actually spend with others. Hence, the total effect of combining all three social-contact channels is small and not statistically different from zero. For singles, on the other hand, we observe that employed people would lose experienced well-being if they had to give up spending time with others at work. This loss could be fully offset if they used their expanded free time to meet others. However, we only see a small increase in the actual amount of non-work time during which singles meet other people. This increase suffices to produce a statistically significant

increase in the enjoyment derived from having more non-work contacts. Taken all three effects together, we find that the contact loss at work is at least partially offset by more non-work contacts, such that the total effect is not statistically different from zero. Hence, neither for partnered nor for single persons do we find evidence that the differences in the contact composition between the employed and the unemployed contribute to differences in their experienced well-being.

4.3. Matching employed and unemployed persons using entropy balancing

Up to this point, we have analyzed differences between employed and unemployed persons. Clearly, people are not randomly assigned into the two groups. As we have shown in Table 1, the employed and the unemployed differ in terms of various demographic and socioeconomic characteristics. For example, the unemployed are generally younger and have less often obtained university degrees than the employed. Hence, we cannot necessarily interpret the observed well-being differences between the two groups as causal effects of unemployment in the sense that the observed differences are the best predictor of what would happen to a representative employed person when becoming unemployed.

In this subsection, we will extend our analysis by matching the unemployed and the employed such that the impact of differences in observable characteristics are eliminated. The matching is conducted using entropy balancing (Hainmueller 2012), which reweights all observations in the control group (the employed) in a way that their observable characteristics correspond to those of the treatment group (the unemployed). We choose age, equivalized household income, household size, the number of children living in the household, gender, and the highest attained level of qualification as the variables on which the matching is performed. Entropy balancing calculates weights such that the distribution of these variables (in terms of first and second moments) is the same in the treatment and the control group. After this reweighting, the employed and the unemployed in the sample are similar in terms of age, gender structure, education, household size, and income, while differing from each other in their employment status.

Table 4: Two-step and five-step decompositions (with entropy balancing)

Married/cohabitating				Single			
Average employed person							
"Time-composition effect"	5.408 (0.030)			5.634 (0.073)			"Time-composition effect"
		0.009 (0.016)	Contact loss at work		-0.004 (0.038)		
	5.417 (0.033)			5.630 (0.082)			
	+0.249 *** (0.026)	0.175 *** (0.031)	Activity-composition effect	0.137 *** (0.057)	+0.197 *** (0.044)		
	5.592 (0.038)			5.767 (0.087)			
		0.064 *** (0.009)	Contact gain in non-work activities	0.065 *** (0.015)			
	5.656 (0.036)			5.832 (0.080)			
"Saddening effect"		-0.047 *** (0.014)	Contact shift when unemployed	-0.030 (0.026)			"Saddening effect"
	-0.326 ** (0.128)	5.609 (0.040)		5.801 (0.081)	-0.241 * (0.146)		
		-0.279 ** (0.126)	Adjusted saddening effect	-0.210 (0.144)			
	5.330 (0.127)		Average unemployed person	5.591 (0.124)			

Notes: Standard errors from bootstrapping with 5000 replications in parentheses. Significance level: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 4 shows the decomposition analysis using the entropy-balanced samples. The results are very similar to those obtained with the unbalanced samples. In particular, for married/cohabiting people we find no significant enjoyment effect of the loss of contacts at work. There is a large and statistically significant increase in well-being associated with the adjusted activity composition (more time spent (alone) on non-work activities). This group could also benefit from spending time with others, but the actual increase is relatively small such that we do not find a statistically significant enjoyment effect of increasing non-work contacts. Just as in the unbalanced analysis, there is no evidence that the changed contact composition relates to well-being differences. Unlike in the unbalanced analysis, the adjusted saddening effect that remains after accounting for changes in time-use and social contacts is negative and statistically significant.

For singles, the results are also rather similar to those of the unbalanced analysis. One noticeably difference is that we do not find a significant reduction in well-being from the loss of contacts at work. The combined third and fourth step (so the impact of the actual change in non-work contacts) is not statistically significant. Hence, also with entropy balancing we do not find evidence that the experienced well-being of singles would be affected by changes in their contact composition when becoming unemployed.

Overall, most results remain unchanged when we conduct our analyses on the matched sample. This suggests that the observed differences are not driven by the different compositions of the two groups, but might instead be indicative of causal effects of unemployment.

5. Conclusion

Our study uses the UK Time-Use Survey 2014/15 to investigate differences in the subjective well-being of employed and unemployed persons as they experience it on a day-to-day basis. We focus on the role of social contacts. Using rich data of time use and enjoyment over the entire day, we examine the hypotheses that the unemployed have less contact with other people than the employed, that they are less able to enjoy the remaining time they spend with other people, e.g. due to shame and perceived stigmatization, and that this taken together causes a reduction in the experienced well-being of the unemployed. We develop an extended decomposition approach to identify the degree to which the ability to freely allocate time across activities, the differences in enjoyment ratings and the access to social contacts can explain the differences in duration-weighted enjoyment scores of the employed and the unemployed.

The starting point of our analysis is the claim that one of the latent benefits of employment is the establishment of social contacts outside the family (Jahoda 1981). Our results partially support this claim. First, people generally enjoy being with others. For both work and non-work activities, we find that experienced well-being is typically higher when these activities can be done with other people than if they had to be done alone, and being with people from outside the household is often rated even more enjoyable than being with other household members. Second, the unemployed spend more time alone than the employed. As can be expected, the employed gain a large share of their social contacts at work, to which the unemployed do not have access. We also find that, although the unemployed have more available free time and are enjoying the time they spend with others, in particular with non-household acquaintances, the unemployed are not able to fully compensate the time the employed spend meeting others at work by increasing the amount

of time they spend with other contacts. One reason for this could be time constraints of other people. Even though the unemployed have a relatively high degree of time flexibility, we observe that they meet other people more often during typical after-work hours or on the weekend.

Our decomposition shows, however, that these large differences in the time spent with others matter only little for the day-average experienced well-being of employed and unemployed persons. While it is true that the employed have contacts at work, while the unemployed do not, these contacts seem to be of little value for the experienced well-being of the employed. Among partnered individuals, we do not find that working with others generates significantly more enjoyment than working alone. Unemployed persons with partners also spend about the same amount of time with non-work contacts as the employed. Since work contacts do not contribute to experienced well-being, while there are no differences in non-work contacts, we do not find that changes in social contacts contribute to well-being differences between employed and unemployed persons with partners. Among singles, in contrast, we find a statistically significant difference in the experienced well-being when working with others compared to working alone, but the magnitude is rather small. At the same time, we observe that unemployed singles are able to spend substantially more time (+1 hour) with non-work contacts than employed singles, which benefits their experienced well-being significantly. Overall, the negative contact loss at work and the positive contact gain during non-work activities balance one another, such that we also do not find a significant role of the total differences in the contact composition between the employed and the unemployed for the experienced well-being of singles. In that sense, our results can be interpreted as a limitation of Jahoda's hypothesis that the establishment of social contacts is a latent benefit of work. While it is the case that the employed have more social contacts than the unemployed, it does not increase their experienced well-being.

The decomposition also reveals that experienced well-being depends strongly on which kinds of activities are conducted during the day. The activity-composition effect, i.e. the ability to allocate less time to work and more time to leisure, even if both had to be done alone, plays the most important role and contributes positively to experienced well-being. With regard to the saddening effect of unemployment, our results support earlier findings. The unemployed typically enjoy the same kinds of activities less than the employed. Our analysis can partly explain this effect. If one only compares average episodes when the employed and the unemployed engage in the same kind of activity, one misses that the unemployed engage in these activities more often alone than the employed. Our decomposition isolates this contact-composition effect and shows that it explains a substantial part of the overall saddening effect. The remaining, "adjusted" saddening effect is

smaller and, at least in our data, often not statistically significant. Whether this result can also be found in other surveys is left for future research.

References

- Birditt, K. S., Turkelson, A., Fingerman, K. L., Polenick, C. A., Oya, A. (2021). Age Differences in Stress, Life Changes, and Social Ties During the COVID-19 Pandemic: Implications for Psychological Well-Being. *The Gerontologist*, 61(2), 205-216.
- Brand, J. E., and Burgard, S. A. (2008). Job Displacement and Social Participation Over the Life Course: Findings for A Cohort of Joiners. *Social Forces*, 87(1), 211–242.
- Bryson, A., and MacKerron, G. (2017). Are You Happy While You Work? *Economic Journal*, 127(599), 106–125.
- Burchardt, T., Le Grand, J., and Piachaud, D. (1999). Social Exclusion in Britain 1991—1995. *Social Policy & Administration*, 33(3), 227-244.
- Clark, A. E. (2003). Unemployment as a Social Norm: Psychological Evidence from Panel Data. *Journal of Labor Economics*, 21(2), 323-351.
- Clark, A. E., and Oswald, A. J. (1994). Unhappiness and Unemployment. *Economic Journal*, 104(424), 648-659.
- Clark, A., Georgellis, Y., and Sanfey, P. (2001). Scarring: The Psychological Impact of Past Unemployment. *Economica*, 68(270), 221–241.
- Clark, A., Knabe, A., and Rätzl, S. (2010). Boon or Bane? Others' Unemployment, Well-Being and Job Insecurity. *Labour Economics*, 17(1), 52-61.
- Dieckhoff, M., and Gash, V. (2015). Unemployed and alone? Unemployment and social participation in Europe. *International Journal of Sociology and Social Policy*, 35(1/2), 67–90.
- Dolan, P., Kudrna, L., and Stone, A. (2017). The Measure Matters: An Investigation of Evaluative and Experience-Based Measures of Wellbeing in Time Use Data. *Social Indicators Research*, 134(1), 57-73.
- Eales, M. J. (1989). Shame Among Unemployed Men. *Social Science and Medicine*, 28(8), 783–789.
- Eckhard, J. (2018). Does Poverty Increase the Risk of Social Isolation? Insights Based on Panel Data from Germany. *The Sociological Quarterly*, 59(2), 338-359.
- Faria, M., Santos, M. R., Sargento, P., and Branco, M. (2020). The Role of Social Support in Suicidal Ideation: A Comparison of Employed vs. Unemployed People. *Journal of Mental Health*, 29(1), 52-59.
- Flèche, S., and Smith, C. (2017). Time Use Surveys and Experienced Well-Being in France and the United States. *OECD Statistics Working Papers*, 2017/07.

- Gallie, D. (1999). Unemployment and Social Exclusion in the European Union. *European Societies*, 1(2), 139-167.
- Gallie, D., Gershuny, J. and Vogler, C. (1994), Unemployment, the Household, and Social Networks, in Gallie, D., Marsh, C. and Vogler, C. (eds.). *Social Change and the Experience of Unemployment*, Oxford University Press, Oxford, 115–53.
- Gangl, M. (2006). Scar Effects of Unemployment: An Assessment of Institutional Complementarities. *American Sociological Review*, 71(6), 986–1013.
- Gershuny, J., and Sullivan, O. (2017). United Kingdom Time Use Survey, 2014-2015, UK Data Service Study Number 8128, <http://doi.org/10.5255/UKDA-SN-8128-1>.
- Gimenez-Nadal, J. I., Molina, J. A., and Velilla, J. (2022). Should We Cheer Together? Gender Differences in Instantaneous Well-Being during Joint and Solo Activities. *Journal of Happiness Studies*, forthcoming.
- Gomboc, V., Krohne, N., Lavrič, M., Podlogar, T., Poštuvan, V., Zadavec Šedivy, N., and De Leo, D. (2022). Emotional and Social Loneliness as Predictors of Suicidal Ideation in Different Age Groups. *Community Mental Health Journal*, 58(2), 311-320.
- Goodman, W. K., Geiger, A. M., and Wolf, J. M. (2017). Leisure Activities are Linked to Mental Health Benefits by Providing Time Structure: Comparing Employed, Unemployed and Homemakers. *Journal of Epidemiology and Community Health*, 71(1), 4-11.
- Hainmueller, J. (2012). Entropy Balancing for Causal Effects: A Multivariate Reweighting Method to Produce Balanced Samples in Observational Studies, *Political Analysis* 20, 25-46.
- Hamermesh, D. S. (2020). Life Satisfaction, Loneliness and Togetherness, With an Application to Covid-19 Lock-Downs. *Review of Economics of the Household*, 18(4), 983-1000.
- Helliwell, J. F., and Putnam, R. D. (2004). The social context of well-being. *Philosophical Transactions of the Royal Society of London, Series B: Biological Sciences*, 359(1449), 1435–1446.
- Hetschko, C., Knabe, A., and Schöb, R. (2014). Changing Identity: Retiring from Unemployment. *Economic Journal*, 124(575), 149-166.
- Hoang, T.T.A., and Knabe, A. (2021a). Time Use, Unemployment, and Well-being: An Empirical Analysis Using British Time-Use Data. *Journal of Happiness Studies*, 22(6), 2525-2548.
- Hoang, T.T.A., and Knabe, A. (2021b). Replication: Emotional well-being and unemployment – Evidence from the American time-use survey. *Journal of Economic Psychology*, 83, 102363.
- Jahoda, M. (1981). Work, Employment, and Unemployment: Values, Theories, and Approaches in Social Research. *American Psychologist*, 36(2), 184–191.
- Kahneman, D., Krueger, A. B., Schkade, D. A., Schwarz, N., and Stone, A. A. (2004). A survey method for characterizing daily life experience: The day reconstruction method. *Science*, 306(5702), 1776–1780.

- Knabe, A., and Rätzel, S. (2010). Better an Insecure Job Than No Job At All? Unemployment, Job Insecurity and Subjective Wellbeing. *Economics Bulletin*, 30(3), 2486-2494.
- Knabe, A., Rätzel, S., Schöb, R., and Weimann, J. (2010). Dissatisfied with Life but Having a Good Day: Time-use and Well-being of the Unemployed. *Economic Journal*, 120(547), 867–889.
- Krueger, A. B., and Mueller, A. I. (2012). Time Use, Emotional Well-Being, and Unemployment: Evidence from Longitudinal Data. *American Economic Review*, 102(3), 594–599.
- Lister, R., MP, F.F., Brown, J.C., Walker, A., Deakin, N., Alcock, P., David, M., Phillips, M., Slipman, S. and Buckingham, A., (1996). Charles Murray and the Underclass: The Developing Debate, IEA Health and Welfare Unit Choice in Welfare No. 33, London.
- McFadyen, R. G. (1995). Coping With Threatened Identities: Unemployed People's Self-Categorizations. *Current Psychology*, 14(3), 233–256.
- Paugam, S., and Russell, H. (2000). The Effects of Employment Precarity and Unemployment on Social Isolation. In Gallie, D., and Paugam, S. (eds.). *Welfare Regimes and the Experience of Unemployment in Europe*, Oxford University Press, 243–64.
- Peterie, M., Ramia, G., Marston, G., and Patulny, R. (2019a). Emotional Compliance and Emotion as Resistance: Shame and Anger Among the Long-Term Unemployed. *Work, Employment and Society*, 33(5), 794-811.
- Peterie, M., Ramia, G., Marston, G., and Patulny, R. (2019b). Social Isolation as Stigma-Management: Explaining Long-Term Unemployed People's 'Failure' to Network. *Sociology*, 53(6), 1043-1060.
- Röhr, S., Wittmann, F., Engel, C., Enzenbach, C., Witte, A.V., Villringer, A., Löffler, M. and Riedel-Heller, S.G., (2021). Social Factors and the Prevalence of Social Isolation in a Population-Based Adult Cohort. *Social Psychiatry and Psychiatric Epidemiology*, 1-10, advance online publication.
- Saeri, A. K., Cruwys, T., Barlow, F. K., Stronge, S., and Sibley, C. G. (2018). Social Connectedness Improves Public Mental Health: Investigating Bidirectional Relationships in the New Zealand Attitudes and Values Survey. *Australian & New Zealand Journal of Psychiatry*, 52(4), 365-374.
- Sarracino, F., and Piekalkiewicz, M. (2021). The Role of Income and Social Capital for Europeans' Well-Being During the 2008 Economic Crisis. *Journal of Happiness Studies*, 22(4), 1583-1610.
- Schöb, R. (2013). Unemployment and Identity. *CESifo Economic Studies*, 59(1), 149-180.
- Shields, M. A., Wheatley Price, S., and Wooden, M. (2009). Life Satisfaction and the Economic and Social Characteristics of Neighbourhoods. *Journal of Population Economics*, 22(2), 421–443.

- Simone, M., Loth, K., Peterson, C. B., Berge, J. M., Eisenberg, M. E., and Neumark-Sztainer, D. (2021). Social Isolation in a Population-Based Sample of Emerging Adults: Who Is on Their Own?. *Emerging Adulthood*, 21676968211021677.
- Spinney, J., and Millward, H. (2010). Time and Money: A New Look at Poverty and The Barriers to Physical Activity in Canada. *Social Indicators Research*, 99(2), 341-356.
- Stavrova, O., and Ren, D. (2021). Is More Always better? Examining the Nonlinear Association of Social Contact Frequency with Physical Health and Longevity. *Social Psychological and Personality Science*, 12(6), 1058-1070.
- United Nations (2016). *International Classification of Activities for Time-Use Statistics*, Department of Economic and Social Affairs, Statistics Division.
- White, M. P., and Dolan, P. (2009). Accounting for the richness of daily activities. *Psychological Science*, 20(8), 1000–1008.
- Williams, J. R., Masuda, Y. J., and Tallis, H. (2016). A Measure Whose Time Has Come: Formalizing Time Poverty. *Social Indicators Research*, 128(1), 265-283.
- Winkelmann, L., and Winkelmann, R. (1998). Why Are The Unemployed So Unhappy? Evidence from Panel Data. *Economica*, 65(257), 1-15.
- Winkelmann, R. (2009). Unemployment, Social Capital, and Subjective Well-being. *Journal of Happiness Studies*, 10(4), 421-430.
- Wolf, T., Metzing, M., and Lucas, R. E. (2022). Experienced Well-being and Labor Market Status: The Role of Pleasure and Meaning. *Social Indicators Research*, 163(2), 691-721.
- Zuelke, A.E., Luck, T., Schroeter, M.L., Witte, A.V., Hinz, A., Engel, C., Enzenbach, C., Zachariae, S., Loeffler, M., Thiery, J. and Villringer, A. (2018). The Association Between Unemployment and Depression – Results from the Population-Based LIFE-Adult-Study. *Journal of Affective Disorders*, 235, 399-406.

APPENDIX

Figure A: Social contact profile of time use over the hours of the day by employment and partnership status – weekdays

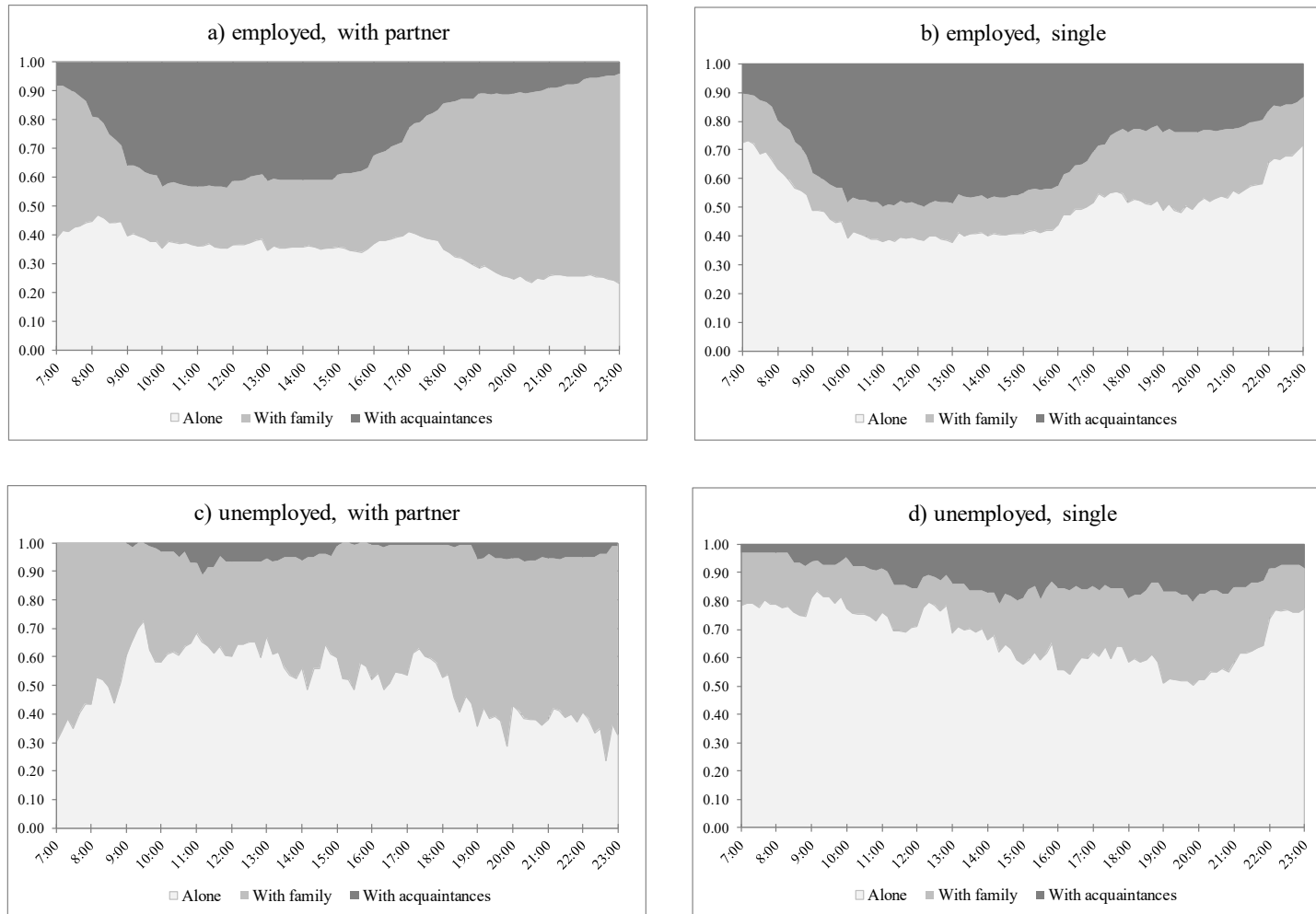


Figure B: Social contact profile of time use over the hours of the day by employment and partnership status – weekends

