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Impact of Employment Contract Changes on Workers' Quality of Working Life, Job Insecurity, Health and Work-related Attitudes

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Abstract: Impact of Employment Contract Changes on Workers' Quality of Working Life, Job Insecurity, Health and Work-related Attitudes: Alfred F. Wagenaar, *et al.* **Behavioural Science Institute, Department of Work and Organizational Psychology, Radboud University Nijmegen, The Netherlands—Objectives:** Changes in employment contracts may impact the quality of working life, job insecurity, health and work-related attitudes. We examined the validity of two partly competing theoretical approaches. Based upon a segmentation approach, we expected no change in scores among stable trajectories, whereas upward trajectories were expected to be for the better and downward trajectories to be for the worse (Hypothesis 1). As turnover theories suggest that this hypothesis may only apply to workers who do not change employer, we also examined these contract trajectories stratified for a change of employer (Hypothesis 2). **Methods and Results:** Drawing on the 2007 and 2008 waves of the Netherlands Working Conditions Cohort Study (N=9,688), repeated measures analysis of covariance showed little across-time change in the criterion variables, thus largely disconfirming our first hypothesis. These results could (at least partly) be explained by employer change; this was generally associated with improved scores among all contract trajectories (Hypothesis 2). However, workers receiving a less stable contract from the same employer were found to be at risk for health and well-being problems. **Conclusions:** Segmentation theory-based assumptions on contract trajectories primarily apply to stable and downward contract trajectories at the same employer, whereas assumptions from turnover theories better apply to contract trajectories combined with a change of employer. Future research should focus more closely on factors predicting "involuntary" downward trajectories into precarious temporary employment or unemployment.

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In the middle of 2011, the European workforce counted around 25.5 million temporary employees[1] (14.2% of the EU active population[2]), and the number of temporary employees is likely to increase as temporary employment is highly dependent on economic growth[3]. Although temporary employment has important advantages for organizations in terms of flexibility and innovativeness, the shift away from firm long-term organizational relationships towards more flexible temporary relationships has raised concerns regarding the health and well-being of the workers involved[4, 5].

Temporary work is often assumed to involve higher job insecurity and a lower quality of working life[4], which in turn are expected to negatively impact workers' health, well-being and work-related attitudes[5–7]. This assumption builds upon a core-periphery model of employment contracts, in which permanent workers are well-sheltered organizational insiders forming the core of an organization, which is surrounded by a "buffer workforce" of multiple layers of temporary workers with increasingly precarious employment[8, 9]. The core-periphery view stems from organizational segmentation theories, which differentiate between primary segment (core) workers and secondary segment (peripheral) workers[9, 10]. Core workers are important to the organization, as they possess scarce skills, valuable knowledge and useful experience

and are hard to replace, whereas the opposite holds for secondary segment workers. Consequently, core workers receive more secure (permanent) and higher quality employment (better working conditions, job content, work relations and terms of employment) than peripheral workers. Therefore, the latter often receive temporary employment contracts.

Impact of contract trajectories on workers' health, well-being and work-related attitudes

Building upon segmentation theories, it can be expected that upward contract changes (towards the core of permanent employment) are generally associated with an improvement in job security, the quality of working life and thus improved health and well-being. The opposite may apply to downward contract changes towards less secure, more temporary employment (e.g., agency or on-call work). The few studies on contract transitions indeed provided some support for these assumptions in terms of workers' job security, supervisory tasks, social support from colleagues, engagement, work satisfaction and risk of psychological distress[11–13]. However, these and other studies also reported nonsignificant and even contradictory results. For example, no impact of a change in employment contract has been found regarding various measures of health, lifestyle, work-related attitudes and life satisfaction[11, 12, 14]. Moreover, contrary to the segmentation assumptions, downward contract trajectories have been associated with an increase in work engagement and affective organizational commitment[14], whereas upward contract trajectories have been associated with an increase in work pace[11] and medically certified sickness absence[12]. These inconsistent findings challenge a segmentation approach towards employment contracts and therefore raise doubts concerning its validity.

Employment contract changes: "deterministic" segmentation or self-initiated change?

Segmentation theories reflect a rather deterministic view on employment contracts because they suggest all upward contract changes to be for the better (i.e., resulting in higher quality and more secure employment) and all downward contract changes to be for the worse. This view ignores the fact that many contract changes are part of a larger, often employee-initiated, change such as a switch in job type or employer, which may alter the consequences for the worker involved. This latter assumption finds support in theories on job turnover, which generally hold that job search and exit behavior stem from an imbalance between costs and rewards of the current job[15]. This means that employees who cannot successfully improve their current employment situation will try to switch employer or job type to acquire a better work situation. Consequently, such changes may often result in an improvement in workers' quality of working life and therefore also in their health, well-being and work-related attitudes. This improvement may be independent from a possible change in contract type: it is conceivable that workers will leave unfavorable permanent employment (e.g., those who are not in their preferred occupation[16]) when they are able to acquire better "fitting" temporary employment. This would make a downward change in contract actually an improvement of workers' employment situation[14]. Furthermore, an employer change combined with the acquisition of a more stable contract is likely to enhance both workers' job security and quality of working life, whereas receiving a more stable contract at the current employer may merely enhance workers' job security but not their quality of working life. In sum, we argue that a change in workers' job type or employer may alter the impact of employment contract changes on workers' health, well-being and work-related attitudes and may therefore account for (some of) the inconclusive findings in this area.

Aim of the current study

In a large and representative longitudinal sample of the Dutch working population, we aimed to examine the validity of the segmentation approach towards employment contract changes by taking into account a change of employer. Therefore, we first differentiated between stable, upward and downward contract trajectories, for which we tested the impact on employee quality of working life, job insecurity, health and work-related attitudes. We started by examining the "segmentation approach" and tested if (a) stable contract trajectories (i.e., no across-time change of contract type) would not be associated with changes in workers' quality of working life, job insecurity, health and work-related attitudes (also because of the limited time-span of the current study; Hypothesis 1a); (b) upward contract trajectories would result in an improvement in scores (except for demands, which are often found to be higher among permanent workers[17, 18]; Hypothesis 1b); and (c) downward contract transitions would result in a deterioration in scores (Hypothesis 1c).

Secondly, we examined whether these segmentation assumptions hold when taking into account a change of employer. As turnover theories suggest employer changes to be generally for the better, they challenge the segmentation assumptions regarding the impact of stable and downward contract trajectories (i.e., Hypothesis 1a and 1c). Consequently, Hypothesis 1 may only apply to workers who do not change employer (Hypothesis 2a), whereas workers

who do change employer can be expected to improve in terms of their quality of working life, and thereby their health and work-related attitudes, irrespective of a change in their employment contract (Hypothesis 2b). We tested these two assumptions by stratifying all previous analyses for a change of employer.

Subjects and Methods

Sample

The current study draws on two waves of the Netherlands Working Conditions Cohort Study[19], which studies the working conditions, health and well-being of the Dutch working population (excluding self-employed workers) over time. The first wave started in October 2007 and continued until January 2008 (N=22,759; response rate: 32.8%) and was generally representative for the Dutch working population[20]. The follow-up measurement (N=10,393; response rate: 54.2%) began in November 2008 and continued until January 2009. A written version of the questionnaires was sent to the respondents' homes, and the accompanying letter also mentioned the possibility of completing the questionnaire online. Note that this study fully complies with the Dutch law on the protection of personal data, which means that respondents have the guarantee that their data is only used for statistical purposes, and that no institution can demand access to their data. As our analyses were restricted to permanent and temporary workers (excluding on-call workers) who filled in the questionnaire at both time points, our final sample comprised 9,686 participants (48.5% males; M_{age-T1}=42.9, SD=11.0). The nonresponse rate during follow-up measurement was 44.6% among permanent employees and varied from 50% (temporary work with the prospect of permanent employment) to 56.7% (temporary agency work) among temporary employees. Note that this nonresponse rate is unlikely to be caused by health selection, as we found no significant health differences at baseline between initially temporary employed participants and nonparticipants.

Measures

1) Employment contract

Five contract types were distinguished using the question "what is the nature of your employment?" (1="permanent employment [for indefinite time]," 2= "temporary employment with the prospect of permanent employment," 3="temporary employment for a fixed term," 4="temporary agency work," and 5= "on-call work"). Note that on-call work was excluded in the current study, as a previous study among another cross-sectional sample of the Dutch working population showed these workers to differ in many respects from other temporary workers[17]. Moreover,

in the Netherlands, the notion of having the prospect of permanent employment refers to explicit clauses in the written formal employment contract, rather than the subjective interpretation of the worker involved.

2) Change of employer

Change of employer was assessed by asking participants: "Did you change employer in the past 12 months?" (1="yes," 2="no" [reversed]).

3) Quality of working life

Quality of working life was assessed by measuring psychosocial work characteristics, including physical working conditions, task demands, autonomy and work relations. Adverse physical working conditions were measured with 7 items derived or adapted from the Permanent Study on Living Conditions (POLS[21]) and the (Dutch) Labour Force Survey (EBB[22]). A typical scale item is "do you have to perform dangerous work?", while other items referred to repeated movements, working in an uncomfortable stance, work that requires the exertion of much force, the use of tools that vibrate or are noisy and exposure to chemicals, dust, gasses or smoke (1="yes, regularly," 2="yes, sometimes," 3="no" [reversed]). The Task demands scale (4 items, e.g., "do you have to perform a lot of work?" 1="never," 4="always") and Autonomy scale (3 items, e.g., "can you decide yourself how to perform your work?" 1="yes, regularly," 2="yes, sometimes," 3="no" [reversed]) were both derived from the Job Content Questionnaire JCQ[23]. Work relations were measured with an adapted version[24] of Karasek's supervisory support (e.g,. "my colleagues help me to get the work done") and coworker support scales (e.g., "my supervisor pays attention to what I say"), both answered on a 4-point Likert scale (1="fully disagree"; 4="fully agree").

4) Job insecurity

Job insecurity was measured with the items (1) "are you at risk of losing your job?" and (2) "are you worried about retaining your job?" (1="yes," 2="no" [reversed]), which were derived from the study of Goudswaard, Dhondt and Kraan[25].

5) Health

Health was assessed by measuring general health, musculoskeletal symptoms and emotional exhaustion. General health was measured with the question "generally taken, how would you define your health?" (1="excellent," 2="very good," 3="good," 4= "moderate," 5="bad" [reversed][21]). Musculoskeletal symptoms were measured with four items developed by Blatter, Bongers, Kraan and Dhondt[26]. The four items concerned (1) the "neck", (2) the "shoulders", (3) the "arms/elbows" and (4) "wrists/hands"; for example, the item for the neck was as follows: "in the past 12 months, did you have trouble (pain, discomfort) from your neck?" (1="no, never"; 2="sometimes,

short lived"; 3="sometimes, long lasting"; 4="multiple times, short lived"; 5="multiple times, long lasting"). Emotional Exhaustion was measured with an adapted five-item version of the corresponding scale of the Maslach Burnout Inventory-General Survey (MBI-GS[27]). A typical item is "I feel burned out from my work" (1="never"; 7=every day").

6) Work-related attitudes

Work satisfaction was measured by asking participants: "to what extent are you, all in all, satisfied with your work?" and "to what extent are you, all in all, satisfied with your working conditions?" (1= "very dissatisfied"; 5="very satisfied"). In-role performance was measured with three items based on the performance indicators defined by Goodman and Svyantek[28]: (1) "I achieve all targets (work assignments) that belong to my work," (2) "I perform well at the tasks involved in my work" and (3) "I perform well at my job" (1="fully agree"; 5="fully disagree" [reversed]). Turnover intention was assessed with two items derived from the study of Goudswaard *et al.*[25]: (1) "in the past year, did you consider to search for a job other than the job at your current employer?" and (2) "in the past year, have you actually undertaken something to find another job?" (1="yes," 2="no" [reversed]).

7) Control variables

Gender, age as a continuous variable, educational level (1, 2 and 3, which respectively represented low, meaning no education, primary school or lowest level of secondary school; moderate, meaning secondary school and intermediate vocational education; and high, meaning higher education such as a university degree [dummy-coded]) and contractual hours were recorded as control variables.

The reliability of all presented scales was generally high (α=0.69−0.88), except for turnover intention (which was moderate: α=0.63), and explanatory factor analysis showed that the items of all scales loaded on the intended factors. If participants did not respond to a question, the answer was coded as missing. For each scale, the scores on the respective items that received a valid response were averaged.

Statistical analysis

In order to test our first hypothesis (regarding the impact of contract trajectories), we clustered all workers into three contract trajectory groups: (1) workers who did not change in employment contract between T1 (2007) and T2 (2008) ("stayers": n=8,614), (2) workers who received a more stable employment contract over time ("upward movers": n=631) and (3) workers who received a less stable contract over time ("downward movers": n=441). Furthermore, to test the role of an employer change (Hypothesis 2), we stratified these three contract trajectory groups for a

change of employer (no or yes), which resulted in six groups.

Before testing both hypotheses, we first analyzed possible baseline differences between the three contract trajectory groups (stayers, upward movers and downward movers) using multivariate analysis of variance (MANOVA) with the quality of working life, job insecurity, health and work-related attitudes indicators as criterion variables. In addition, we conducted Bonferroni post hoc analyses to examine the between-group differences in more detail and computed corresponding Cohen's *d* values as effect size[29]. Following Cohen[30], we distinguished between small (*d*=0.2 to 0.5), moderate (*d*=0.5 to 0.8), and large (*d* ≥0.8) effects. Secondly, we repeated these analyses separately for the no change of employer and at least one change of employer groups.

To test our first hypothesis, we conducted a 3 (group: stayers versus upward versus downward) × 2 (time: T1 versus T2) analyses of covariance with repeated measures on time (RM-ANCOVA) for each quality of working life indicator, job insecurity and health and work-related attitudes indicator. In these analyes, we controlled for age and educational level at baseline and for a change of contractual hours (by subtracting the number of contractual hours worked at baseline from those at follow-up). Additionally, we computed for each contract trajectory group Cohen's *d*s for the across-time change of workers' quality of working life, job insecurity, health and work-related attitudes scores.

In order to test our second hypothesis, we repeated the previous RM-ANCOVAs for the three contract trajectory groups stratified for a change of employer.

Results

Baseline differences

1) Contract trajectory groups

We found many significant baseline differences in the quality of working life, job insecurity, health and work-related attitudes between stayers, upward movers and downward movers (see Table 1 for mean scores at T1: $F_{(24, 18318)}$=23.42, p <0.01). As many differences were negligibly small in terms of effect size, we will only report differences with a small effect size or more (*d* ≥0.20). First, univariate analysis revealed that upward movers had the most favorable baseline scores for task demands and supervisory support, and compared with downward movers, they also scored more favorably on co-worker support, emotional exhaustion, work satisfaction and turnover intention (all $F_{s (2, 9169)}$ ≥ 7.21, all ps < 0.01). Furthermore, stayers were the most job secure, and compared with downward movers, they reported higher autonomy and a lower turnover intention (all $F_{s (2, 9169)}$ ≥ 15.92,

Table 1. Contract trajectories: Change in the quality of working life, job insecurity, health and work-related attitudes

Change in contract:	No change (n[2]=8,614)				Upward (n=631)				Downward (n=441)				F[6]		
	T1		T2	D[5]	T1		T2		D	T1		T2		D	G	T	G×T
Concept (theoretical range[1])	M[3] SD		M[4] SD		M	SD	M	SD		M	SD	M	SD				
Adverse physical working conditions (1−3)	1.41 0.4		1.40 0.5	−0.02	1.39 0.4		1.41 0.4	0.04		1.41 0.4		1.34 0.4		−0.16	G*	T**	G×T**
Task demands (1−4)	2.38 0.6		2.37 0.6	−0.01	2.18 0.6		2.26 0.6	0.13		2.36 0.6		2.25 0.6		−0.19	G**		G×T**
Autonomy (1−3)	2.60 0.6		2.62 0.5	0.04	2.50 0.6		2.56 0.5	0.11		2.49 0.6		2.50 0.6		0.02	G**	T*	
Supervisory support (1−4)	2.84 0.7		2.84 0.6	−0.01	3.02 0.6		2.99 0.6	−0.05		2.72 0.7		2.93 0.7		**0.32**	G**		G×T**
Coworker support (1−4)	3.27 0.5		3.26 0.5	−0.02	3.34 0.5		3.36 0.5	0.04		3.23 0.6		3.29 0.5		0.11	G*		G×T**
Job insecurity (1−2)	1.15 0.3		1.16 0.3	0.03	1.28 0.4		1.14 0.3	**−0.40**		1.24 0.4		1.31 0.4		0.16	G**	T**	G×T**
General health (1−5)	3.46 0.8		3.43 0.8	−0.04	3.55 0.8		3.47 0.8	−0.10		3.53 0.8		3.55 0.8		0.02			
Musculoskeletal symptoms (1−5)	1.91 1.0		1.87 1.0	−0.04	1.90 1.0		1.81 1.0	−0.09		1.94 1.0		1.89 0.9		−0.06			
Emotional exhaustion (1−7)	1.93 1.1		1.97 1.1	0.04	1.85 1.0		1.93 1.1	0.08		2.21 1.3		1.99 1.1		−0.18	G**		G×T**
Work satisfaction (1−5)	3.84 0.7		3.80 0.7	−0.05	3.90 0.7		3.86 0.8	−0.05		3.51 0.8		3.73 0.8		**0.27**	G**		G×T**
In-role performance (1−5)	4.40 0.5		4.39 0.6	−0.02	4.33 0.6		4.37 0.6	0.06		4.35 0.6		4.29 0.6		−0.11	G**		G×T*
Turnover intention (1−2)	1.35 0.4		1.35 0.4	−0.01	1.43 0.4		1.38 0.4	-0.12		1.64 0.4		1.53 0.4		**−0.26**	G**		G×T**

[1]Higher scores reflect higher quantities of the measured concept. [2]Maximum N: actual Ns differed per analysis due to missing values. [3]Mean score T1 (2007). [4]Mean score T2 (2008). [5]Cohen's D effect size for the mean difference between T1 and T2: relevant effect sizes are in bold (i.e., $d \geq 0.20$). [6]Significance of the F-values referring to the main effects of group (G), the main effects of time (T) and the interaction effects between group and time (GxT) controlled for gender, age, educational level and change in contractual hours. * $p < 0.05$. ** $p < 0.01$.

ps < 0.01). Note that these baseline differences were small, except for the difference in work satisfaction and turnover intention between upward and downward movers (respectively, d=0.50 and d=0.51) and the difference in turnover intention between stayers and downward movers (d=0.73), which represent moderate effects.

2) Contract trajectory—same employer groups

Among workers who stayed with the same employer over time, we found similar but fewer "relevant" ($d \geq 0.20$) baseline differences between the three contract trajectory groups (see Table 2 for mean scores at T1: F (24, 16668)=10.35, p <0.01). Again, we found that upward movers were more satisfied with their work at baseline than downward movers and that they reported more supervisory support at baseline than stayers (but not compared with downward movers) (both Fs (2, 8344) ≥8.09, ps <0.01). Moreover, stayers "still" reported the lowest baseline job insecurity and, compared with downward movers, also higher autonomy; but they also reported the highest task demands (all Fs (2, 8344) ≥6.25, all ps <0.01). All these baseline differences were small.

3) Contract trajectory—new employer groups

Among workers who changed employer between 2007 and 2008, we found various significant and "relevant" ($d \geq 0.20$) baseline differences between three trajectory groups (see Table 3 for mean scores

at T1: F (24, 1574)=3.11, p <0.01). Upward movers reported the lowest task demands at baseline but also the lowest autonomy, and they scored more favourably on supervisory support than downward movers (all Fs (2, 797) ≥3.99, all ps <0.05). Moreover, stayers reported better baseline scores for job insecurity compared with upward movers, and they reported better scores for emotional exhaustion and work satisfaction compared with downward movers (all Fs (2, 797) ≥4.39, all ps <0.05). Again, these baseline differences were small, except for the difference in autonomy between stayers and upward movers (d=0.53), which represents a moderate effect.

Across-time changes
1) Hypothesis 1

Impact of employment contract trajectories. The repeated-measures ANCOVA's for the three contract trajectories (Table 1) showed a pattern of significant group differences over time that was similar to the baseline pattern, although many of these group differences seemed to have decreased over time. In addition, we also found some significant main effects of time, but these were not consistent among the various trajectory groups.

In order to test Hypothesis 1, we focused on the group × time interaction effects. First, the results in Table 1 support Hypothesis 1a (stable contract trajec-

Table 2. Contract trajectories—No change in employer: Change in the quality of working life, job insecurity, health and work-related attitudes

Change in contract:	No change (n[2]=8,208)				Upward (n=509)				Downward (n=105)				F[6]		
	T1		T2		D[5]	T1		T2		D	T1		T2		D	G	T	G×T
Concept (theoretical range[1])	M[3]	SD	M[4]	SD		M	SD	M	SD		M	SD	M	SD				
Adverse physical working conditions (1–3)	1.41	0.5	1.40	0.5	–0.01	1.38	0.4	1.41	0.5	0.07	1.37	0.4	1.43	0.5	0.12			GxT**
Task demands (1–4)	2.38	0.6	2.37	0.6	–0.01	2.18	0.6	2.27	0.6	0.15	2.18	0.7	2.28	0.7	0.15	G**	T**	GxT**
Autonomy (1–3)	2.60	0.6	2.62	0.5	0.03	2.54	0.5	2.57	0.5	0.06	2.43	0.6	2.37	0.6	–0.10	G**		
Supervisory support (1–4)	2.85	0.7	2.83	0.6	–0.03	3.04	0.6	2.98	0.6	–0.10	2.91	0.7	2.75	0.8	**–0.23**	G**	T**	
Coworker support (1–4)	3.27	0.5	3.26	0.5	–0.04	3.35	0.5	3.35	0.5	0.00	3.28	0.5	3.29	0.5	0.03			
Job insecurity (1–2)	1.15	0.3	1.16	0.3	0.04	1.26	0.4	1.12	0.3	**–0.42**	1.23	0.4	1.40	0.4	**0.40**	G**	T**	GxT**
General health (1–5)	3.45	0.8	3.42	0.8	–0.04	3.54	0.8	3.49	0.8	–0.06	3.61	0.9	3.54	0.9	–0.07			
Musculoskeletal symptoms (1–5)	1.91	1.0	1.87	1.0	–0.04	1.87	1.0	1.80	0.9	–0.08	1.81	1.0	1.82	0.9	0.01			
Emotional exhaustion (1–7)	1.92	1.1	1.98	1.1	0.05	1.79	0.9	1.95	1.1	0.16	1.90	1.2	1.99	1.1	0.08		T**	
Work satisfaction (1–5)	3.85	0.7	3.80	0.7	–0.07	3.98	0.7	3.86	0.8	–0.17	3.77	0.7	3.56	0.9	**–0.25**	G**	T**	GxT*
In-role performance (1–5)	4.40	0.5	4.39	0.6	–0.02	4.32	0.6	4.38	0.5	0.11	4.33	0.6	4.38	0.6	0.09			GxT**
Turnover intention (1–2)	1.34	0.4	1.34	0.4	0.01	1.37	0.4	1.37	0.4	0.00	1.38	0.4	1.48	0.4	**0.22**	G*	T**	GxT*

[1]Higher scores reflect higher quantities of the measured concept. [2]Maximum N: actual Ns differed per analysis due to missing values. [3]Mean score T1 (2007). [4]Mean score T2 (2008). [5]Cohen's D effect size for the mean difference between T1 and T2: relevant effect sizes are in bold (i.e., $d \geq 0.20$). [6]Significance of the F-values referring to the main effects of group (G), the main effects of time (T) and the interaction effects between group and time (GxT) controlled for gender, age, educational level and change in contractual hours. * $p < 0.05$. ** $p < 0.01$.

tories are associated with "stable" scores), since all Cohen's d effect sizes for the change in criterion variables were negligibly small ($d <0.06$). However, the results in Table 1 hardly support Hypothesis 1b (upward trajectories are for the better) and Hypothesis 1c (downward trajectories are for the worse): although job insecurity improved among upward movers, all other indicators hardly changed over time ($d <0.20$). Moreover, many indicators hardly changed among downward movers, while their scores for supervisory support, work satisfaction and turnover intention improved instead of deteriorated (small effects).

2) Hypothesis 2: Impact of employment contract trajectories and a change of employer

First and partly in support of Hypothesis 2a, the results for workers who did not change employer partly corroborated the segmentation assumptions posed in Hypothesis 1 (see Table 2). As expected, scores among the stable group (same contract—same employer) remained fairly stable over time ($d <0.08$) and various scores among downward movers (at the same employer) deteriorated, i.e., in terms of supervisory support, job insecurity, work satisfaction and turnover intention (small effects). However, little evidence was found for an improvement in scores among upward movers, as only their job insecurity improved (small effect), whereas all other scores hardly changed.

Second, the results in Table 3 largely support Hypothesis 2b (all contract trajectories with an employer change are for the better). Among all workers who changed employer, social support (coworker and/or supervisory support) and work satisfaction increased and turnover intention decreased. In addition, workers in an upward contract trajectory also improved in terms of their autonomy, job insecurity and emotional exhaustion (although their general health decreased). Moreover, workers in a downward trajectory also improved in terms of their physical working conditions, task demands and emotional exhaustion. Note that all these effects were small, except for the increase in supervisory support among downward movers ($d=0.50$) and the decrease in turnover intention among upward movers ($d=-0.64$), which represent moderate effects.

Discussion

Many workers enter, leave or change jobs within the labor market each year[3]. The current study focused on Dutch workers who reported a change of employment contract between 2007 and 2008 using data from a nationally representative, longitudinal sample of 9,688 Dutch workers. We examined the impact of stable, upward and downward contract trajectories on workers' quality of working life, job insecurity, health and

Table 3. Contract trajectories—Change in employer: Change in the quality of working life, job insecurity, health and work-related attitudes

Change in contract:	No change (n²=385)						Upward (n=118)						Downward (n=335)						F^6		
	T1		T2		D^5		T1		T2		D		T1		T2		D		G	T	G×T
Concept (theoretical range¹)	M^3	SD	M^4	SD			M	SD	M	SD			M	SD	M	SD					
Adverse physical working conditions (1−3)	1.39	0.4	1.32	0.4	−0.16		1.42	0.4	1.38	0.4	−0.10		1.42	0.4	1.32	0.4	**−0.24**			T*	
Task demands (1−4)	2.39	0.6	2.31	0.6	−0.14		2.19	0.6	2.20	0.6	0.02		2.42	0.6	2.23	0.6	**−0.30**				GxT*
Autonomy (1−3)	2.59	0.5	2.65	0.5	0.11		2.31	0.7	2.50	0.6	**0.30**		2.51	0.6	2.54	0.6	0.06		G**	T*	
Supervisory support (1−4)	2.71	0.7	2.99	0.7	**0.40**		2.90	0.7	3.02	0.6	0.18		2.66	0.7	2.99	0.6	**0.50**				
Coworker support (1−4)	3.23	0.5	3.35	0.5	**0.23**		3.26	0.5	3.38	0.6	**0.22**		3.21	0.6	3.29	0.5	0.14				
Job insecurity (1−2)	1.20	0.4	1.20	0.4	0.01		1.36	0.4	1.22	0.3	**−0.36**		1.25	0.4	1.28	0.4	0.09		G**	T*	GxT**
General health (1−5)	3.57	0.8	3.50	0.8	−0.08		3.57	0.8	3.38	0.8	**−0.25**		3.50	0.8	3.55	0.8	0.06				GxT**
Musculoskeletal symptoms (1−5)	1.88	1.0	1.89	1.0	0.01		2.03	1.2	1.89	1.0	−0.13		1.98	1.0	1.91	1.0	−0.08				
Emotional exhaustion (1−7)	2.03	1.1	1.84	1.0	−0.18		2.13	1.3	1.88	1.0	**−0.21**		2.30	1.3	1.99	1.1	**−0.26**		G*		
Work satisfaction (1−5)	3.61	0.8	3.90	0.8	**0.36**		3.53	0.9	3.86	0.8	**0.39**		3.43	0.8	3.79	0.8	**0.45**		G**		
In-role performance (1−5)	4.34	0.6	4.34	0.6	0.00		4.39	0.7	4.30	0.8	−0.13		4.36	0.6	4.26	0.6	−0.17				
Turnover intention (1−2)	1.67	0.4	1.48	0.4	**−0.45**		1.70	0.4	1.43	0.4	**−0.64**		1.71	0.4	1.54	0.4	**−0.44**		G*	T**	

¹Higher scores reflect higher quantities of the measured concept. ²Maximum N: actual Ns differed per analysis due to missing values. ³Mean score T1 (2007). ⁴Mean score T2 (2008). ⁵Cohen's D effect size for the mean difference between T1 and T2: relevant effect sizes are in bold (i.e., $d \geq 0.20$). ⁶Significance of the F-values referring to the main effects of group (G), the main effects of time (T) and the interaction effects between group and time (GxT) controlled for gender, age, educational level and change in contractual hours. * $p < 0.05$. ** $p < 0.01$.

work-related attitudes from a segmentation perspective. We expected no change among stable trajectories, positive changes among upward trajectories and negative changes among downward trajectories. As previous findings were not always in line with this view, we also explored the role of experiencing a change of employer in this relationship as a possible explanatory mechanism, especially since turnover theories suggest employer changes to be for the better irrespective of the employment contract trajectory workers are in. Table 4 summarizes the support for each of our hypotheses. Overall, it can be concluded that segmentation assumptions regarding the impact of employment contract changes largely held for job insecurity, but not for workers' quality of working life, health and work-related attitudes, as these aspects strongly depended on a change of employer. In line with turnover theories, a change of employer had overall positive consequences regardless of the contract trajectory workers were in. Nevertheless, the impact of contract trajectories for those workers who remained with their current employer was more in line with the segmentation view.

Theoretical and practical implications

First, an employer change had positive consequences in terms of workers' quality of working life and their health and work-related attitudes, irrespective of the type of contract trajectory. Although this finding goes against segmentation theories, it corroborates turnover theories[15], which hold that workers change employer to improve their current employment situation. Interestingly, this "improvement" could also be achieved by a downward change in contract, as these workers reported an improvement in their demands, supervisory support, emotional exhaustion, work satisfaction and turnover intention. These findings are in line with a recent Belgian study[18] showing an increase in work engagement and, to a lesser extent, affective organizational commitment among permanent workers who moved downward into fixed-term employment. Therefore, many workers may accept a less stable contract with another employer to improve their initial situation, perhaps also with regard to their future career opportunities.

Second, segmentation theories do have explanatory power for understanding contract trajectories within the same employer. We found stable trajectories (at the same employer) to be associated with stable outcomes and downward trajectories to be associated with deterioration in various indicators, which is in line with previous findings on the impact of contract trajectories[11–14]. However, there was no clear improvement in scores among workers involved in an

Table 4. Synthesis of evidence

Hypothesis 1:		Support[1]		Overall support
(*H1a*) No contract change=No change in				
Quality of working life	5/5	+		
Job insecurity	1/1	+	+	Supported
Health	3/3	+		
Work-related attitudes	3/3	+		
(*H1b*) Upward contract change=Positive change in				
Quality of working life	0/5	–		
Job insecurity	1/1	+	±	Partly supported
Health	0/3	–		
Work-related attitudes	0/3	–		
(*H1c*) Downward contract change=Negative change in				
Quality of working life	0/5[a]	–		
Job insecurity	0/0	–	–	Not supported
Health	0/3	–		
Work-related attitudes	0/3[b]	–		

Hypothesis 2:									
(*H2a*) No change of employer =Same expectations as in Hypothesis 1								Partly supported	

	No contract change =No change			Upward contract change =Positive			Downward contract change =Negative		
Quality of working life	5/5	+		0/5	–		1/5	+/–	
Job insecurity	1/1	+	+	1/1	+	–	1/1	+	±
Health	3/3	+		0/3	–		0/3	–	
Work-related attitudes	3/3	+		0/3	–		2/3	+/–	

(*H2b*) Change of employer =Positive change in								Largely supported	

	No contract change			Upward contract change			Downward contract change		
Quality of working life	2/5	+/–		2/5	+/–		3/5	+/–	
Health	0/3	–	±	1/3[c]	+/–	±	1/3	+/–	±
Work-related attitudes	2/3	+/–		2/3	+/–		2/3	+/–	

[1]Support level: total number of indicators for which the hypothesis is supported: +=supported, +/–=partly supported, –=not supported. [a]Supervisory support increased. [b]Work satisfaction increased and turnover intention decreased. [c]General health decreased.

upward contract trajectory, except for their job insecurity. This may be explained by the fact that these workers "just" received a more stable contract, in that they kept the same employer and probably also the same job type over time. With such an administrative change, not much change in their quality of working life, health and work-related attitudes would be expected. Our study thus suggests that segmentation theory-based assumptions on contract trajectories primarily apply to stable and downward contract trajectories at the same employer, whereas assumptions from turnover theories better apply to contract trajectories combined with a change of employer.

Third, the current study indicates that temporary workers with few opportunities to change employer may constitute a risk group for future health and well-being problems due to continuous exposure to the negative aspects of temporary work (higher job insecurity and a lower quality of working life[17, 31]). This may especially apply to workers involved in a downward contract trajectory at their initial employer, which is unlikely to have occurred "voluntarily" given the negative consequences of this transition in terms of their supervisory support, job insecurity, work satisfaction and turnover intention. In addition to temporary workers, permanent workers who find themselves in unfavorable employment (e.g., not in their preferred occupation[16]) may also constitute a risk group for future health and well-being problems. As secure employment is a valuable asset these days, it may discourage many permanent workers from changing employer, leaving them at risk for future health and

well-being problems.

Strengths and limitations

The most important asset of the current study is probably its large and representative longitudinal sample of the Dutch working population. This gave us the opportunity to apply a fine-grained, theory-based approach towards examining stable, upward and downward contract trajectories (i.e., based on segmentation theories and turnover theories), which may be considered a second asset of our study. By taking into account employer changes, this study is one of the first studies that does not examine employment contract changes as isolated events but as changes that may impact workers' entire employment situation. Finally, we measured a broad range of important work characteristics, including job insecurity, health indicators and work-related attitudes, using valid and reliable measures.

Despite these strong points, the current study has also some important limitations. First, our study only included two time points, covering a one-year time span. Therefore, changes in the quality of working life, job insecurity, health and work-related attitudes may be small and no long-term "follow-up" perspectives could be tested. For instance, we could not exclude the possibility that positive consequences of an employer change were only temporary and due to a "honeymoon-hangover" effect (the pattern that after a job change scores often improve but in time deteriorate[32]). Moreover, no information was available concerning the exact moment (i.e., in which month) participants changed contract type and / or employer. Consequently, we could not control for variations in the length of exposure to a new contract type or employer among the participants. A final limitation is the lack of information on the degree to which contract trajectories and a change of employer occurred voluntarily. Many temporary workers may have remained in their contract because they could not acquire a permanent contract, making this a "forced" trajectory. The same may apply to temporary and permanent workers in an unfavorable work situation without the opportunity to change employer or workers who changed employer but as a "last resort" to avoid unemployment. As control over one's work situation belongs to the core elements of job stress theories[7], it may be one of the most important aspects in determining the impact of contract and employer changes on workers' health, well-being and work-related attitudes.

Future research

The current study suggests several avenues for future research. First, a downward contract transition may serve as a mechanism to cope with an unfavorable work situation. Moreover, many of these downward transitions may not only lead to better work but may also serve as a bridge to future permanent employment, as temporary work is often used as a probation period before acquiring permanent employment[33]. The "bridge" or "stepping stone" function of temporary work has only been studied for upward contract changes (such as trajectories involving transitions from unemployment or temporary work towards permanent employment[14, 34]). However, downward trajectories from stable—but unfavorable—employment to less stable—but favorable—work should also be considered as a way to obtain both stable and favorable work in the future. Second and in line with this, future research should study contract trajectories over a longer time span with multiple measurement points in order to identify more specific contract trajectories carrying risks for workers' health and well-being. Therefore, future research should focus more closely on factors predicting workers' (lack of) control over contract and employer changes. In this respect, health selection mechanisms[35] may be of particular importance, as healthy workers may have better chances of receiving permanent employment, whereas less healthy workers may be at risk for out-selection into less stable temporary employment or unemployment[36]. Besides health, other factors may warrant attention as well, such as employability[37], work centrality[17], type of work (e.g., low vs. high qualified work[38]) and demographic information like workers' age and their level of education.

Concluding remarks

The current study found weak evidence for a deterministic, labor market-driven view of the effects of contract transitions on employee health and well-being. It is not the case that downward contract changes consistently and necessarily have corresponding adverse consequences for the work situation or employee health and well-being. Rather, downward transitions may often involve a conscious and voluntary decision to temporarily accept a position that is more attractive in many respects than the previous job, as it is likely that this (often) "probation period"[33] will be followed by a transition towards an even more attractive permanent appointment in the same job. The current study suggests that both temporary and permanent workers who find themselves in an unfavorable work situation without opportunities to change employer may constitute a risk group for future health, well-being and attitudinal problems and future unemployment, particularly during the recent economically difficult times in many European countries[3].

References

1) Eurostat. Temporary employees by sex, age groups and highest level of education attained (1000). [Online]. 2011 [cited 2011 Oct 6]; Available from: URL: http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=lfsq_etgaed&lang=en

2) Eurostat. Temporary employees as a percentage of the total number of employees for a given sex and age group (%). [Online]. 2011 [cited 2011 Oct 6]; Available from: URL: http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=lfsq_etpga&lang=en

3) European Commission. Employment in Europe 2010. Brussels: European Commission; 2010.

4) De Cuyper N, De Jong J, De Witte H, Isaksson K, Rigotti T, Schalk R. Literature review of theory and research on the psychological impact of temporary employment: towards a conceptual model. Int J Manag Rev 2008; 10: 25–51.

5) Virtanen M, Kivimäki M, Joensuu M, Virtanen P, Elovainio M. Temporary employment and health: a review. Int J Epidemiol 2005; 34: 610–22.

6) Cheng GHL, Chan DKS. Who suffers more from job insecurity? A meta-analytic review. Appl Psychol Int Rev 2008; 57: 272–303.

7) Kompier M. Job design and well-being. In: Schabracq MJ, Winnubst JAM, Cooper CL, editors. The handbook of work and health psychology, 2nd ed. Chichester (UK): Wiley; 2003. p.429–54.

8) Aronsson G, Gustafsson K, Dallner M. Work environment and health in different types of temporary jobs. Eur J Work Organ Psychol 2002; 11: 151–75.

9) Kalleberg AL. Flexible firms and labor market segmentation: effects of workplace restructuring on jobs and workers. Work Occup 2003; 30: 154–75.

10) Hudson K. The new labor market segmentation: labor market dualism in the new economy. Soc Sci Res 2007; 36: 86–312.

11) Kompier M, Ybema JF, Janssen J, Taris T. Employment contracts: cross-sectional and longitudinal relations with quality of working life, health and well-being. J Occup Health 2009; 51: 193–203.

12) Virtanen M, Kivimäki M, Elovainio M, Vahtera J, Ferrie JE. From insecure to secure employment: changes in work, health, health related behaviours, and sickness absence. Occup Environ Med 2003; 60: 948–53.

13) Virtanen P, Vahtera J, Kivimäki M, Liukkonen V, Virtanen M, Ferrie J. Labor market trajectories and health: a four-year follow-up study of initially fixed-term employees. Am J Epidemiol 2005; 161: 840–6.

14) De Cuyper N, Notelaers G, De Witte H. Transitioning between temporary and permanent employment: A two-wave study on the entrapment, the stepping stone and the selection hypothesis. J Occup Organ Psychol 2009; 82: 67–88.

15) Steel RP, Lounsbury JW. Turnover process models: review and synthesis of a conceptual literature. Hum Resour Manage R 2009; 19: 271–82.

16) Aronsson G, Göransson S. Permanent employment but not in a preferred occupation: psychological and medical aspects, research implications. J Occup Health Psychol 1999; 4: 152–63.

17) Wagenaar AF, Kompier MAJ, Houtman ILD, Van den Bossche S, Smulders P, Taris WT. Can labour contract differences in health and work-related attitudes be explained by quality of working life and job insecurity? Int Arch Occup Environ Health 2012; 85: 763–73.

18) Letourneux V. Precarious Employment and Working Conditions in Europe. Luxembourg: European Foundation for the Improvement of Living and Working Conditions; 1998.

19) Koppes LLJ, De Vroome EMM, Van den Bossche SNJ. The Netherlands Working Conditions Cohort Study. Hoofddorp (The Netherlands): TNO; 2010.

20) Van den Bossche SNJ, Koppes LLJ, Granzier JJM, De Vroome EMM, Smulders PGW. Nationale Enquête Arbeidsomstandigheden 2007 [The Netherlands working conditions survey 2007: Methodology and overall results]. Hoofddorp (The Netherlands): TNO; 2008.

21) Statistics Netherlands. Permanent Onderzoek Leefsituatie (POLS) Gezondheid 2004 [Permanent living conditions and health survey 2004]. Heerlen (The Netherlands): Centraal Bureau voor de Statistiek; 2003.

22) Granzier JJM, Kösters L, Van der Valk J. Vergelijking meting arbeidsongevallen NEA versus EBB. Voorburg (The Netherlands): CBS; 2008.

23) Karasek R, Brisson C, Kawakami N, Houtman I, Bongers P, Amick B. The Job Content Questionnaire (JCQ): an instrument for internationally comparative assessments of psychosocial job characteristics. J Occup Health Psychol 1998; 3: 322–55.

24) Houtman ILD, Goudswaard A, Dhondt S, Van der Grinten M, Hildebrandt V, Kompier M. Evaluatie van de monitorstudie naar stress en lichamelijke belasting [Evaluation of the stress and physical strain monitor]. The Hague (The Netherlands): VUGA; 1995.

25) Goudswaard A, Dhondt S, Kraan K. Flexibilisering en Arbeid in de Informatie-maatschappij; werknemersvragenlijst, bestemd voor werknemers van organisaties die deelnemen aan het SZW-Werkgeverspanel 1998 [Flexibilization and work in the information society, employee questionnaire for employees of organizations participating in the SZW employers panel 1998]. Hoofddorp (The Netherlands): TNO; 1998.

26) Blatter BM, Bongers PM, Kraan KO, Dhondt S. RSI-klachten in de werkende populatie. De mate van vóórkomen en de relatie met beeldschermwerk, muisgebruik en andere ICT gerelateerde factoren [RSI complaints in the working population. The prevalence and relationship with computer and mouse use and other ICT-related factors]. Hoofddorp (The Netherlands): TNO; 2000.

27) Schaufeli WB, Leiter MP, Maslach C, Jackson

SE. Maslach Burnout Inventory-General Survey (MBI-GS). In: Maslach C, Jackson SE, Leiter MP, editors. MBI Manual, 3rd ed. Palo Alto (CA): Consulting Psychologists Press; 1996.

28) Goodman SA, Svyantek DJ. Person-organization fit and contextual performance: do shared values matter. J Vocat Behav 1999; 55: 254–75.

29) Hartung J, Knapp G, Sinha BK. Statistical meta-analysis with applications. Hobroken (NJ): John Wiley & Sons, Inc; 2008:14, formula 2.2.

30) Cohen J. Statistical power analysis for the behavioral sciences, 2nd ed. Hillsdale, NJ: Erlbaum; 1988.

31) Wagenaar AF, Taris WT, Houtman ILD, Van den Bossche S, Smulders P, Kompier MAJ. Labour contracts in the European Union, 2000–2005: Differences among demographic groups and implications for the quality of working life and work satisfaction. Eur J Work Organ Psychol 2012; 21: 169–94.

32) Boswell WR, Boudreau JW, Tichy J. The relationship between employee job change and job satisfaction: the honeymoon-hangover effect. J Appl Psychol 2005; 90: 882–92.

33) Isaksson K, Peiró JM, Bernhard-Oettel C, Caballer A, Gracia FJ, Ramos J. Flexible employment and temporary contracts: the employer's perspective. In: Guest DE, Isaksson K, De Witte H, editors. Employment contracts, psychological contracts, and employee well-being. New York: Oxford University Press; 2010. p.45–64.

34) De Graaf-Zijl M, van den Berg GJ, Heyma A. Stepping stones for the unemployed: the effect of temporary jobs on the duration until (regular) work. J Popul Econ 2011; 24: 107–39.

35) Shah D. Healthy worker effect phenomenon. Indian J Occup Environ Med. 2009; 13: 77–9.

36) Wagenaar AF, Kompier MAJ, Houtman ILD, Van den Bossche S, Smulders P, Taris WT. Employment contracts and health selection: unhealthy employees out and healthy employees in? J Occup Environ Med 2012; 54: 1192–200.

37) Leschke J. The segmentation potential of non-standard employment: A four-country comparison of mobility patterns. Int J Manpower 2009; 30: 692–715.

38) Scherer S. Stepping-stones or traps? The consequences of labour market entry positions on future careers in West Germany, Great Britain and Italy. Work Employ Soc 2004; 18: 369–94.