


Fast or slow food? Explaining trends in food-related time in the Netherlands, 1975–2005

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Abstract

The current study analysed trends in the time spent preparing and consuming food and the frequency of outsourcing (going out for dinner and take-out) in the Netherlands from 1975 to 2005. We investigated differences between trends on week and weekend days and for different socio-demographic groups. Analyses using pooled data from the Dutch Time Use Survey ($N=13,421$) revealed a downward trend in minutes preparing and consuming food and an increase in outsourcing. This overall downward trend could not be accounted for by controlling for structural changes (e.g. increased labour force participation). Moreover, we found that the decrease in time was stronger for days during the week than during the weekend. And we found that the trends differed by household type and sex: e.g. for food preparation there is an overall decrease, except for men with a partner; they showed an increase in time spent preparing food.

Keywords

food, consumption, outsourcing, time use, trend analysis, slow food, the Netherlands

Introduction

Mealtimes constitute a fundamental part of people's routines and the time spent preparing and consuming meals may have important health, as well as social implications (DeVault, 1991; Warde et al., 2007). When more time is spent in the kitchen and at the dinner table, this is likely to indicate a higher quality,

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healthier meal that provides more opportunity to interact with family and friends. In Western societies, the rapid expansion of the fast food industry and the increasing availability of time-saving meal options (ranging from micro-wave meals to pre-prepared and prepackaged foods) hint at a decrease in food-related time. Despite the common belief that home cooked meals have been replaced by fast food and families have dinner 'on the run' (Putnam, 2000), the last decades have also been characterized by societal changes that might have counteracted such developments. Men increased their participation in household chores including the preparation of meals (e.g., Gershuny, 2000). Also, cooking has become an increasingly popular hobby and there is a heightened awareness of healthy food (consider, for example, the popularity of such chefs as Jamie Oliver and the 'slow food movement'). This apparent contradiction presents an interesting puzzle: are we moving to a 'fast food' society and do trends in food-related time reflect a change towards individualization and time scarcity? Or are we moving to a 'slow food' society instead?

The current study extends prior research in at least four ways: first, although time-use research considered food-related time either as part of household labour (Sociaal en Cultureel Planbureau (SCP), 2006), as leisure (e.g., Gershuny, 2000), or as personal care (SCP, 2006), we argue that it deserves specific attention, exactly *because* it crosses the borders of traditional time use categories. Second, we differentiate between compositional and behavioural changes that may underlie observed trends. Compositional changes refer to large structural changes that alter the composition of the population (e.g. women entering the labour market). Behavioural changes refer to observed changes that remain once structural changes are taken into account. For example, a net increase in food-related time could reflect the increasing popularity of slow food. Third, we separate between trends in time use during the week and in the weekend because we expect that food preparation and consumption have a more leisurely character at weekends and that time restrictions (e.g., from work) are relatively low. Fourth, we argue that gender interacts with household type. For example, it is likely that single men have been affected less by changing gender ideologies than men with a partner. Overall, our study will increase our knowledge on the ways in which time use patterns develop and vary across social-demographic groups.

We use the long running Dutch Time Use Survey (DTUS). The DTUS includes time diary data for every fifth year between 1975 and 2005. Because this covers a longer time period than most time use data, it provides a unique opportunity to extend the scope of prior research (e.g. Gershuny, 2000). Moreover, the Netherlands is interesting to study because socio-economic differences in time-use are large (Warde et al., 2007). By focusing on one country, we are able to perform a more in-depth analysis of change over time. Similar to Warde et al. (2007), we define food-related time as the time spent preparing meals (cooking) and the time spent consuming (eating and drinking) food at home. Moreover, we examine trends in activities that may substitute food preparation and consumption, namely the frequency of going out for dinner and going for take-away food. Note that we analyse the time spent on food as a primary activity because the DTUS does not have information on secondary activities. We may therefore underestimate the total time spent in food-related activities (e.g., watching television and eating simultaneously). However, we are primarily interested in primary time. If one is multitasking there is less attention for the process, the meal itself, and the others at the table and the social and health benefits are likely to be higher. In summary, this paper investigates whether food preparation and consumption has 'slowed down, sped up, or kept pace' by addressing the following three research questions: (1) Has the time spent preparing and consuming food and drinks decreased, increased or remained stable in the Netherlands? (2) To what extent can trends be attributed to compositional changes? And (3) do trends differ by socio-demographic group and between weekdays and weekends?

Theoretical framework

So far, studies on *trends* in food-related time have been scarce, with some notable exceptions (Cheng et al., 2007; Warde et al., 2007). For example, Warde et al.'s (2007) comparison of five countries between the early 1970s and late 1990s demonstrated that the time spent preparing food and eating at home declined, whereas eating out increased. Their results also suggested that gender differences

became less pronounced, whereas family demands became more salient. Moreover, research by Heisig (2011) and others showed the increased availability of time-saving technologies (such as microwaves) has led to a significant reduction in the time spent in domestic labour, especially for lower income women (Heisig, 2011).

We know more about cross-sectional differences in food-related time. Women spend more time *preparing* food than men (Cheng et al., 2007; Johnston and Swanson, 2006; Offer and Schneider, 2011) and food preparation time is higher among individuals who are older, have (more) children, and are lower educated (Cheng et al., 2007; Gershuny, 2000: 191; Warde et al., 2007). The time spent *consuming food* is positively correlated with age and income, and negatively correlated with work hours (Cheng et al., 2007; Hamermesh, 2010).

Below we extend general explanations for domestic work, leisure, and personal care to formulate hypotheses on trends in food-related time. Because food-related time crosses the borders of these time-use categories, there is no general dominant theoretical framework that we can draw from. Instead, our hypotheses are informed by insights in time availability, lifestyles, and gender norms. We first address the possible structural changes and then formulate hypotheses on behavioural changes. Unless otherwise specified, the hypotheses apply to both the time spent preparing meals and consuming meals during the week and at the weekend. Moreover, we do not formulate specific hypotheses on the trends to going out for dinner and going for take-away food, but presume that the opposite effect applies; i.e. a decrease in food-related time should be accompanied by an increase in going out for dinner and take-away food.

Structural changes

Similar to other post-industrialized countries, the past decades in the Netherlands have been characterized by (a) a decrease in the average household size, (b) educational expansion, and (c) a rise in (female) labour force participation. We expect that these inter-related social structural changes led to a decrease in available time for leisure, care, and domestic work and therefore to a decrease in food-related time (*Hypothesis 1*). We explain our specific expectations below.

Household size. In the last decades the average household size decreased as the result of decreasing fertility rates and increasing divorce rates (SCP, 2011). As a result, a larger proportion of society faced no more, or fewer family demands in 2005 than in 1975. The time availability approach (Greenhaus and Beutell, 1985) argues that the level of involvement in housework depends on the demands that are made. Consequentially, the decrease in family demands would result in a decrease in the time spent preparing food. The level of social interaction at the dinner table may also be lower in smaller families. For example, in smaller families it may take less time to discuss the daily experiences of family members. Finally, smaller households may be more likely to outsource home-based food production, because the costs of home consumption are lower when the ratio of people with an income (adults) and those without (children) improves, whereas eating out is relatively expensive with a large family. Thus, we hypothesize that the downward trend in food-related time can partly be attributed to the decrease in household size (*Hypothesis 1a*).

Educational expansion. The second change, educational expansion, may have resulted in a society in which a larger proportion of the population has little time available for extensive meal preparations or dinners (Gershuny, 2000). Higher educated individuals are not only scarcer in time, they generally earn higher hourly wages which increases the opportunity costs of domestic work. This may discourage food-related activities and encourage outsourcing of food-related time. We therefore hypothesize that the downward trend in food-related time can partly be attributed to educational expansion (*Hypothesis 1b*).

Labour force participation. The rise in female labour force participation increased the demands outside the family domain (e.g., extended working hours) and thereby limits the available time for household and leisure activities (Greenhaus and Beutell, 1985), including food preparation and consumption. In addition, people in paid employment have more money to spend on alternatives such as take-away food and dining-out to home food production. We thus expect that the downward trend in food-related time can partly be attributed to the increase in labour force participation (*Hypothesis 1c*).

Week-weekend

We hypothesize that the negative trends in food-related time are weaker at the weekend than during the week (*Hypothesis 2*) because the social structural changes mainly affected time availability during the working week. Work demands are less important at weekends, so people can more easily plan domestic activities and leisure. Although in 2005, 27.4% of Dutch employees worked non-standard hours (Presser et al., 2008), the large majority do not have work obligations during the weekend.

General and group-specific behavioural change

General behavioural change. People may have changed their behaviour by spending more or less time on preparing and consuming food *net* of structural changes. Nowadays, we know more about the nutritional value of food and the notion of ‘good food’ has changed. Moreover, contemporary naturalist norms strongly discourage artificial products and unprocessed, organic food is generally regarded as more beneficial (Badinter, 2011: 35). These trends have been accompanied by a surge in the popularity of cookbooks and cooking programs and the rise of the ‘slow food’ movement. Because of the increased awareness of the importance of food, we predict that food-related time increased after controlling for social structural changes (*Hypothesis 3*). Note that this hypothesis concerns a prediction on the ‘net’ change. This general expectation can be further specified as it is likely that the direction and strength of the trend in food-related time varies across socio-demographic groups.

Behavioural changes by gender and household type. Traditionally, women spend more time in domestic labour, including food preparation. Although food consumption is generally not characterized as domestic labour, it does involve ‘emotional work’, the maintenance of social relations in the family, and child care for which women typically carry the main responsibility (Johnston and Swanson, 2006; Offer and Schneider, 2011). The persistence of a number of such gender differences notwithstanding, the last decades have been characterized by a shift towards more egalitarian attitudes (Cotter et al., 2011) and a more equal division of household work (Gershuny, 2000). Men did not increase their time equally over all types of unpaid labour: Robinson and Godbey (1999) showed that men allocate additional time in the household mostly to more enjoyable activities, such as playing with children. Because preparing food and having dinner with the children are classic examples of activities that are relatively enjoyable and rewarding in terms of status and appreciation (Gershuny, 2000: 71), the ‘gender convergence’ in time-use between men and women may be especially strong when food-related time is concerned. Thus, we expect that the difference between men and women in food-related time decreased (with men increasing and women decreasing their food-related time) (*Hypothesis 4*). Moreover, food preparation and consumption is likely to be more leisurely and less demanding at weekends. As a result, it is likely that men have increased their time *preparing* food more at the weekend than on weekdays. Consequently, the gender convergence in food preparation may be stronger at weekends.

In order to formulate hypotheses on differences between men and women, we need to allow for variations by *household type*. It is likely that the change in gender ideology has had a greater impact in households where men and women have to negotiate and where they are able to re-allocate who does what. We therefore expect that the hypothesized upward trend for men and downward trend for women were *less strong* for single men and women compared to cohabiting men and women (*Hypothesis 5*).

Whereas we expect a convergence for men and women, we predict a *divergence* between parents and people without children. Parenthood ideologies intensified over the last decades and despite the rise in work demands, parents are now spending more, rather than less time with their children (Badinter, 2011; Gauthier et al. 2004; Hays, 1996). Moreover, as the number of children decreased, the quality of care for the remaining children increased (Becker, 1991; Bianchi, 2000). As a result of these changing norms, parents may increasingly value a home-cooked meal and a 'quality time' dinner and have become less susceptible to the lure of fast-food and having dinner 'on the run', even though parents may feel more time-squeezed in general. Therefore, if we take Hypothesis 1a through 1c as the basis, we expect that the downward trend in food-related time is weaker for parents than for childless individuals (*Hypothesis 6*).

Behavioural changes by educational level. The last decades were characterized by increasing work demands (e.g., Bianchi et al., 2006; Gauthier et al., 2004), and work demands are especially high in modern 'post-Fordist' organizations where employees are relatively highly educated (Van Echtelt, 2007). Gershuny (2000) argued that these trends have made higher educated individuals busier. Thus, if we assume that food-related time is mostly leisure, we would expect that higher educated individuals spend less time on food and that this educational gap in food-related time increases over time. However, higher educated people have more access and are more open to the increasing availability of information on healthy lifestyles and also have the means to act in accordance with norms promoting healthier food. Therefore, it is likely that they were more susceptible to the increased knowledge on and popularity of 'slow food'. Because we cannot predict whether the role of food awareness outweighs the increasing demands put on higher educated people, we formulate competing hypotheses: the downward trend in food-related time is weaker (*Hypothesis 7a*) or stronger (*Hypothesis 7b*) for lower educated than for higher educated individuals.

Methods

Data

We pooled seven waves of the DTUS. Each wave is representative of the Dutch population over 12 years of age. The survey consists of a questionnaire and a time diary. Respondents keep track of their activities and report what they have been doing for every 15 minutes of one week (in October). The pooled data set contained 17,961 respondents. We selected the 13,421 respondents aged between 18 and 64 years and who lived on their own. These respondents can be expected to be responsible for their own meals (this setup avoids problems with children living at home and elderly who may receive help). We used listwise deletion of missing values, which reduced the sample to 13,138 (97.9%) respondents without missing values.

In the Netherlands, response rates are generally low (Stoop, 2005), and since time diaries are time intensive response rates are quite low. They varied between 76 per cent in 1975, 54 per cent in 1980 and 1985 (De Heer and Israels, 1992), 49 per cent in 1990, 20 per cent (the low point) in 1995 (Van den Broek and Knulst, 1999), and 25 per cent in 2000. The more recent survey from 2005 had a response rate of 37 per cent (Intomart GfK, 2006). The questions and categories are nearly identical each year. The analyses were weighted to represent the population at each survey year in terms of gender, age, occupational status, urbanization, size and type of household and place in the household to minimize the potential bias of the varying and low response rates.

Measurement

Dependent variables. On the basis of the time diaries, we calculated the minutes spent cooking and preparing meals and the minutes eating and drinking at home during the week and at the weekend (which makes four variables). We defined the weekend as Friday 16:00 hours to Sunday midnight. In addition,

we studied two alternatives; we counted the number of times people go out for dinner and go for take-away per week. There was no information on going for a take-away in the 1975 wave so for this variable we examined the trend between 1980 and 2005 instead.

Independent variables. We grouped respondents into eight groups based on their gender and household composition. The reference category was comprised of a partnered man and one or more children (termed 'partnered father'). The contrasts were 'partnered mother', 'partnered man', 'partnered woman', 'single man', 'single women', 'single father', and 'single mother'. This variable therefore also captures household size. Note that there are few single fathers/mothers (1 per cent and 4 per cent respectively). We kept the single fathers/mothers in the analyses for sake of inclusiveness, but we will not discuss the trends for these groups in detail as the cell counts are too small. We further included covariates for the respondent's age (5-year intervals), educational level (primary, secondary/vocational, degree+), and current employment (not working, part-time, full-time). Table 1 reports descriptive information.

Analytical strategy

We analysed the amount of food-related time and the times people go out for dinner and go for take-away food between 1975 and 2005 in the Netherlands. First, we show the overall trend in these past 30 years in Figure 1. Second, we used OLS regression techniques to model the minutes spent on cooking and eating and drinking during the week and at the weekend. For the frequency of outsourcing, we used negative binominal regression models. This is an adequate technique to deal with count variables for which the variance is larger than the mean, as was the case here.

In each model we distinguished between the week and the weekend (except for the outsourcing models). For each outcome variable we estimated the same sequence of models. In the first step, we included the year of the survey to model the overall trend. In the second step we included the socio-demographic controls. By doing so, the effect of the year of the survey reflects the 'net' trend in food-related time. This enabled us to test Hypotheses 1a through 3. In the third and final step, we modelled interactions with time to test whether trends in time differ by socio-demographic group (Hypotheses 4–7). In addition, we plotted the predicted values by gender and household type to facilitate interpretation. Note that the interactions are difficult to interpret for the two outsourcing models, as these are multiplicative models. We relied on predicted marginal effects instead.

Results

The overall trends

Figure 1 shows the trends in the time spent preparing food and consuming food and the frequency of going for dinner in a restaurant and going for takeout in the past 30 years in the Netherlands. The negative trend for food-related time and the positive trend for outsourcing are in line with our main expectation (Hypothesis 1).

Tables 2–4 present the models that disentangle the trends in preparation (Table 2), consumption (Table 3), and outsourcing (Table 4). Note that the coefficients for current employment and age categories were omitted from these tables due to space constraints, please see the online supplement for the full tables. The first set of models (1a–1f) indicate an overall downward trend in food-related time and an increase in outsourcing. Note that the models for the weekdays estimate the average over four and half days (Monday to Friday afternoon) and the models for the weekend estimate the average over two and half days (Friday afternoon through Sunday). To illustrate, in the 30 years between 1975 and 2005 the Dutch decreased their food preparation time during the week by an average of 52 minutes (-1.73×30),

Table 1. Descriptive Statistics (unweighted). $N = 13,138$ ($N = 12,239$ for take-away).

	Mean	St.dev.	Min.	Max.
Preparing meals (minutes)				
Week	153.44	135.77	0	1350
Weekend	76.43	69.34	0	555
Consuming meals (minutes)				
Week	316.13	178.76	0	1860
Weekend	189.08	102.19	0	1260
Going out for dinner (times per week)	.32	.74	0	7
Going for take-away (times per week)	.19	.47	0	6
Year (1975=0, 2005=30)	15.56	8.78	0	30
Partnered father (=ref.)	.20	–	0	1
Partnered mother	.31	–	0	1
Partnered man	.13	–	0	1
Partnered woman	.15	–	0	1
Single father	.01	–	0	1
Single mother	.04	–	0	1
Single man	.07	–	0	1
Single woman	.08	–	0	1
Primary education (=ref.)	.47	–	0	1
Secondary or vocational	.26	–	0	1
Degree+	.27	–	0	1
No work	.43	–	0	1
Part time	.22	–	0	1
Full time	.37	–	0	1
Age				
18–24	.09	–	0	1
25–29	.15	–	0	1
30–34	.17	–	0	1
35–39	.15	–	0	1
40–44	.12	–	0	1
45–49	.09	–	0	1
50–54	.10	–	0	1
55–59	.06	–	0	1
60–64	.07	–	0	1

which amounts to ~ 12 minutes per *weekday* (divided by 4.5) and 16 minutes ($-.54 \cdot 30$) in the weekend, which amounts to ~ 6 minutes per *weekend* day (divided by 2.5).

The time spent consuming during the week and at the weekend decreased with respectively 86 minutes (19 per day) and 37 minutes (15 per day) (see Table 4). The significant effect of the year trend for restaurant dinners and take-away visits indicates that the frequency of outsourcing increased over time, by a yearly factor of about 1.023. This amounts to a doubling of restaurant dinners ($1.023^{30} = 1.98$) and a 72 per cent increase in take-away visits ($1.022^{25} = 1.72$). Note that going for take-away was not asked at the first wave in 1975.

In the second step (Models 2a–2f), we included a number of socio-demographic variables. These allow for changes in the composition of the population during the thirty years of the study. We interpret the effect of year now as the net ‘behavioural’ effect. The trends were substantially reduced in each model, which fits with the predictions from Hypotheses 1a–1c. The reduction was more profound for preparation than for consumption: for preparation, the predicted yearly decrease in minutes was reduced by ~ 55 per cent (-1.73 versus $-.79$ during the week and $-.54$ versus $-.28$ in the weekend), whereas the

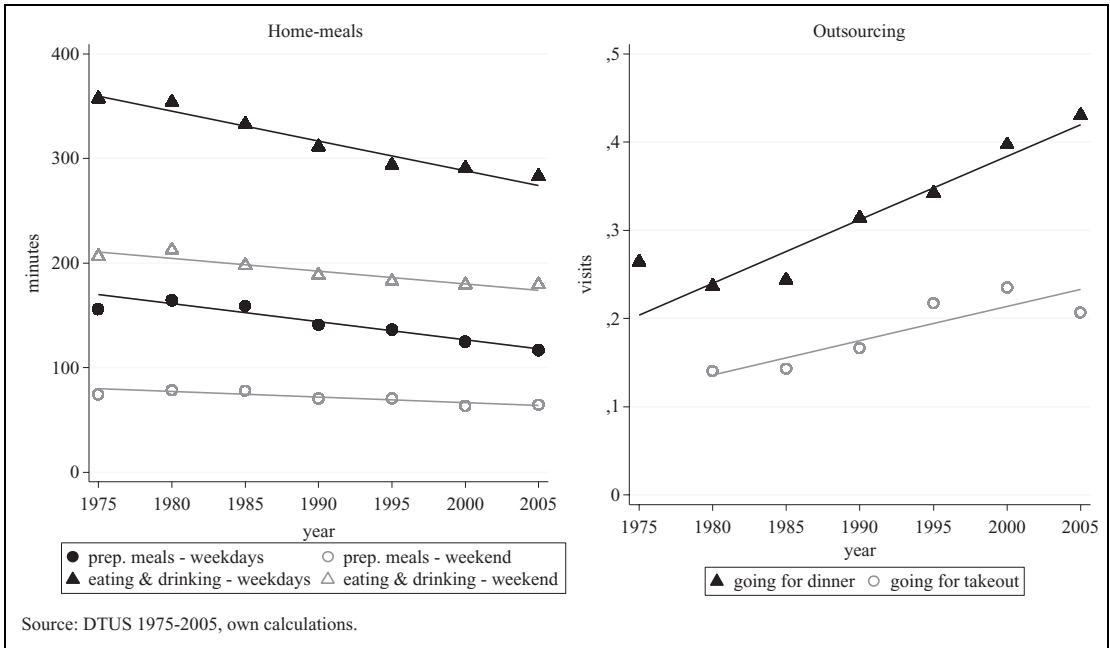


Figure 1. Fast or slow food? Trends in food-related time and number of times going for dinner and takeout (markers = observed mean minutes/visits in each wave; lines fit the best linear trend).

coefficients in the models predicting consumption were reduced by ~35 per cent (-2.85 versus -1.87 and -1.23 versus -.80). Moreover, whereas the inclusion of the compositional effects also reduced the upward trend in the frequency of restaurant dinners (1.023 versus 1.010), the compositional effects did not account for the increase in take-away visits (1.022 vs 1.025). Analyses that included the compositional variables separately confirmed that structural changes in household composition, educational level, and labour force participation each explained a substantial part of the trends (results not reported). Changes in household composition explained the largest part. Changes in the age distribution did not affect the respective trends.

Thus, as predicted, the downward trend was partly explained by the decrease in household size (H1a), educational expansion (H1b), and increase in labour force participation (H1c). Overall, the trends were stronger during the week than at the weekend, which confirms Hypothesis 2. The negative effect of year remained significant in these models, which means that we had to reject Hypothesis 3, which predicted an increase in food-related time as the result of an increasing popularity of 'slow food'. Only for restaurant dinners we observed a slight decrease after taking the structural factors into account.

Trends by socio-demographic group

Hypotheses 4–7 made predictions on socio-demographic *differences* in the trends in food-related time and outsourcing. We tested these hypotheses with the third set of models (Models 3a–3f) that included interaction terms for gender, household composition and educational level with the year of the survey. Note that the main effects in these models are now conditional because the models include interaction terms. For example, in Model 3a (Table 2) the effect of the year indicates the trend for the combined reference group: a partnered father and a secondary/vocational education. The positive sign implies that they increased time preparing food during the week. As the interaction terms are difficult to interpret, we use graphs of the predicted values (Figure 2) and discuss the predicted marginal effects (results not

Table 2. OLS regression of minutes spent preparing meals during the week and in the weekend ($N = 13,138$).

	Preparing meals during the week			Preparing meals in the weekend		
	Model 1a	Model 2a	Model 3a	Model 1b	Model 2b	Model 3b
Year (1975=0, 2005=30)	-1.73***	-.79***	1.55***	-.54***	-.28***	.94***
Partnered father (=ref.)						
Partnered mother		176.79***	228.55***		78.58***	104.50***
Partnered man		18.15***	18.55**		5.13*	8.65*
Partnered woman		130.86***	186.27***		64.97***	90.68***
Single father		20.90**	68.05*		7.91	37.06*
Single mother		116.45***	207.06***		59.01***	105.50***
Single man		58.82***	96.03***		27.44***	46.94***
Single woman		75.58***	118.51***		43.30***	74.77***
Primary education (=ref.)						
Secondary or vocational		-15.57***	-7.67		-4.76**	-.90
Degree+		-23.08***	-12.07*		-.33	4.18
<i>Change over time (interactions)</i>						
Partnered mother * year			-3.47***			-1.75***
Partnered man * year			-.22			-.33
Partnered woman * year			-3.58***			-1.68***
Single father * year			-2.84**			-1.69**
Single mother * year			-5.25***			-2.71***
Single man * year			-2.44***			-1.29***
Single woman * year			-2.78***			-1.98***
Secondary or vocational * year			-.52			-.25
Degree+ * year			-.76**			-.32
Constant	169.81***	123.28***	85.81***	80.13***	52.88***	33.63***
R ²	.01	.45	.46	.00	.30	.31

Coefficients for current employment and age not shown but included in the analyses, see online supplement for full table.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$, two-sided

shown). Please note that the trends for the small group of single fathers and mothers were omitted from Figure 2 to improve clarity.

Gender and household type. We fitted the combination of gender and household type in each of the models and interacted each combination with year (i.e., three-way interactions). Omnibus tests of these household gender interactions revealed that they improved the fit of the models. Figure 2 show the predicted trends for men and women combined and by household type (based on Models 3a–3f). Note that the explained variance by socio-demographic indicators in the models 2a–2d are considerably higher for the time spent in preparation of meals than for the time spent eating and drinking (.30-.45 versus .09-.18), and the explained variance is higher during the week than in the weekend. This implies that structural constraints on people's time play a stronger role for preparation than for consumption and these play a stronger role during the (working) week than at the weekend.

We first discuss the overall trends for men and women (thick solid lines in Figure 2). Hypothesis 4 predicted that the gender gap would close because men would show an upward - and women a downward trend. This expectation was partially confirmed because the gap closed for preparation but not for consumption. In 1975 women spent an estimated 203 minutes more on preparation on weekdays than did men and this difference decreased to 114 minutes in 2005. The gap decreased from 90 to 46 minutes

Table 3. OLS regression of minutes eating and drinking during the week and in the weekend ($N = 13,138$).

	Eating and drinking during the week			Eating and drinking in the weekend		
	Model 1c	Model 2c	Model 3c	Model 1d	Model 2d	Model 3d
Year (1975=0, 2005=30)	-2.85***	-1.87***	-3.40***	-1.23***	-.80***	-1.43***
Partnered father (=ref.)						
Partnered mother		13.14	-12.30		-3.43	-9.92
Partnered man		-15.41*	-15.67		-18.51***	-19.45**
Partnered woman		-29.89***	-61.39***		-23.29***	-34.79***
Single father		-5.72	-7.13		-24.84*	-68.42
Single mother		-42.56***	-77.15***		-35.01***	-41.83**
Single man		-73.17***	-122.04***		-60.28***	-91.39***
Single woman		-98.90***	-163.71***		-57.59***	-91.73***
Primary education (=ref.)						
Secondary or vocational		-.52	-12.52		-.40	-9.49
Degree+		-9.66*	-15.69*		1.98	3.54
<i>Change over time (interactions)</i>						
Partnered mother * year			1.71**			.45
Partnered man * year			.12			.12
Partnered woman * year			2.04***			.78*
Single father * year			.54			2.05
Single mother * year			2.09*			.49
Single man * year			2.86***			1.78**
Single woman * year			3.91***			2.07***
Secondary or vocational * year			.75			.54
Degree+ * year			.47			-.03
Constant	359.50***	419.09***	442.31***	210.59***	227.93***	236.70***
R ²	.02	.18	.19	.01	.09	.09

Coefficients for current employment and age not shown but included in the analyses, see online supplement for full table.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$, two-sided.

at the weekend. In contrast, we found a slight divergence for consumption. In 1975, men spent about 30 minutes less on consumption than did women (325 versus 356 minutes) and this gap widened to 80 minutes in 2005 (246 versus 326 minutes). Both men and women decrease their time in consumption, but the downward trend is much stronger for men. On weekend days, men and women did not differ in 1975, but the difference became significant because men decreased their time consuming more than women did. Nevertheless, the difference is only minor (11 minutes). With regard to outsourcing, we found that women used to visit restaurants less frequently than men, but over time the difference disappeared because women increased the frequency (from .20 visits to .34), whereas men did not (.35 to .38). Both men and women increased the frequency of going for take-away food, but even though men showed a stronger increase (see Figure 2f) this gap remained insignificant.

We now discuss trends for men and women by household type (see Figure 2a–f). Hypothesis 5 predicted that the upward trend for men and downward trend for women would be *less strong* for singles compared to partnered men and women. The results provided partial support for this hypothesis: the trends for single men and women (the dash-dot lines) ran mostly parallel (except for consumption during the week and going out for dinner) and most ‘action’ occurs for the cohabiting men and women with and without children. The single individuals differed from the other household types in two respects. First, whereas single women differed little from other women in their preparation time, they did deviate in the time consuming food and drink: compared to cohabiting women, single women spent less time in consumption in

Table 4. Negative binomial regression of number of times per week going out for dinner and going for take-away food (incidence rate ratios).

	Going out for dinner			Going for take-away food		
	Model 1e	Model 2e	Model 3e	Model 1f	Model 2f	Model 3f
Year (1975=,2005=30)	1.023***	1.010**	.997	1.022***	1.025***	1.036***
Partnered father (=ref.)						
Partnered mother		.794**	.584***		.812*	1.194
Partnered man		1.475***	1.288		1.178	1.534*
Partnered woman		1.360***	1.016		1.021	1.292
Single father		.865	.855		.645	1.238
Single mother		1.120	1.071		.903	1.604
Single man		1.600***	2.009***		1.314*	2.514***
Single woman		1.560***	1.119		.889	.993
Primary education (=ref.)						
Secondary or vocational		1.496***	1.401*		.942	.924
Degree+		1.957***	1.667***		.794***	.597***
<i>Change over time (interactions)</i>						
Partnered mother * year			1.019*			.977**
Partnered man * year			1.009			.984
Partnered woman * year			1.018*			.986
Single father * year			1.004			.970
Single mother * year			1.004			.970
Single man * year			.990			.966**
Single woman * year			1.019			.992
Secondary or vocational * year			1.005			1.002
Degree+ * year			1.010			1.015*
Constant	.218***	.147***	.182***	.125***	.144***	.117***
In alpha	.690***	.472***	.463***	-.283	-.729***	-.7596***
BIC	18821.8	18508.5	18575.1	12397.9	12168.2	12232.5
N		13,138			12,239	

Coefficients for current employment and age not shown but included in the analyses, see online supplement for full table.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$, two-sided.

1975, but over time single women increased their time consuming, whereas partnered women did not. As a result single women caught up to partnered women. Second, over time the initially large differences between single and partnered men in preparation and consumption decreased. The trends for single men in preparation paralleled the trend for women in general, except for going out for dinner and consumption at the weekend. Summarizing, we can conclude that trends for single individuals differed from partnered people, which is in line with Hypothesis 5. We cannot claim, however, that the trends for men and women were more moderate for single individuals, because in some models the trends for single men and women were opposite to the trends for their cohabiting counterparts. Hypothesis 6, which predicted stronger trends for parents than childless people, was rejected. As is clear from Figure 2 the lines for partnered men and women with and without children run mostly parallel. Moreover, single fathers and mother decreased their preparation time slightly more than their childless counterparts (not shown in Figure 2).

Educational level. Hypothesis 7a predicted that the downward trend in food-related time would be weaker for the higher educated compared to the lower educated, whereas Hypothesis 7b predicted the opposite.

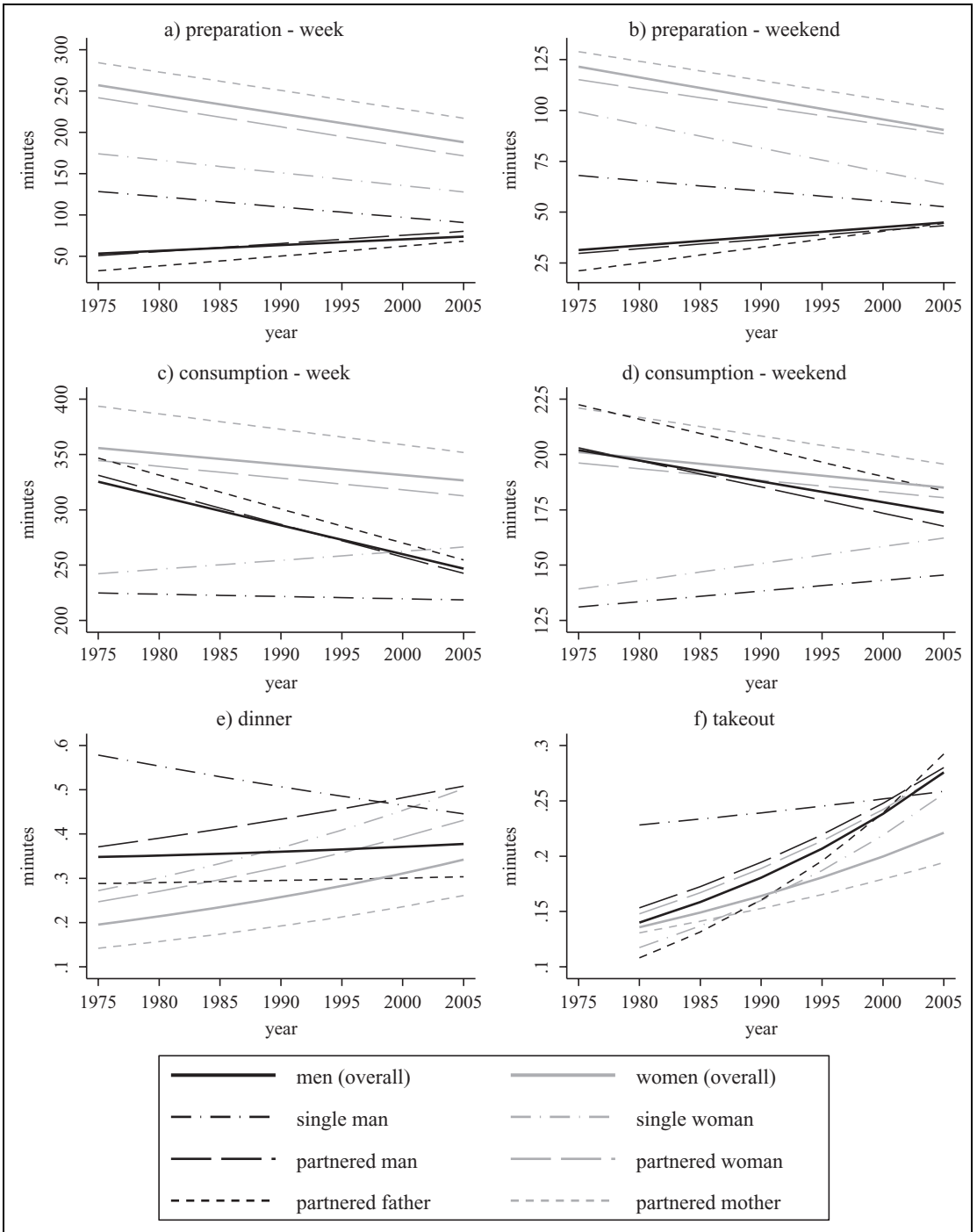


Figure 2. Predicted minutes/visits by household type (models 3a–f). Note that predicted minutes/visits for single fathers and mothers are not depicted.

Omnibus tests of the educational level interactions showed that the trends did not differ; only the interactions for preparation were significant ($F(2) = 4.12, p = .0162$), we therefore do not show figures for the trends by educational level. So, overall, we did not find support for either hypothesis: there were no systematic trends by educational level. There were three exceptions: first, for preparation, the results suggest people with a primary education decreased their time preparing from 175 to 157 minutes, whereas the two higher educated groups showed a much steeper decrease; from 148 (vocational) and 135 (degree) minutes in 1975 to 115 and 112 in 2005 respectively. Second, educational differences in restaurant visits widened: because outsourcing models were multiplicative models, we inspected marginal predictions by the year of observation. In 1975 we found minor educational differences in restaurant visits; there was no significant difference between primary and secondary/vocational level (.20 and .30 visits respectively) and only people with a degree were more likely to visit restaurants than people with only primary level (.38, i.e. about once every two and half weeks). The differences increased over time: by 2005 the gap between highest and lowest level had doubled (.56 versus .23) and secondary level diverged from primary level (.39 visits, a difference of about .16). Third, differences in takeout visits disappeared: in 1980, people with a primary and secondary level both go about .15 times a week, those with a degree go less often; .10 visits. Over time, the frequency steadily increased for each group and university level educated people caught up. By 1995 the differences became insignificant. In 2005, each group is predicted to go .25 times per week, so once every four weeks.

Conclusion and discussion

Are we moving towards a fast-food or slow-food society? The aim of this study was to gain insight in trends in the time people spent preparing and consuming food at home between 1975 and 2005 in the Netherlands. In addition, we studied changes in the frequency of restaurant visits and going for take-away food. Moreover, we distinguished between food-related time during the week and the weekend and separately examined trends by socio-demographic group. This in-depth analysis proved to be fruitful. Our main findings can be summed up as follows: 1) the time spent preparing and consuming food and drink at home went down, while outsourcing doubled; 2) the trends can be attributed to social structural changes in the composition of the population, namely decreased household size, educational expansion, and increased (female) labour force participation; 3) despite the increasing popularity and awareness of food in popular culture, the net 'behavioural' change (controlling for structural changes) was negative, suggesting that people decreased the time they spent on food; 4) the effects were stronger during the week than at the weekend; 5) we found large differences by household type and gender, independent of the day or the exact type of activity; and 6) educational differences remained quite stable over time.

The downward trend in the time spent preparing and consuming food in the Netherlands indicates a shift to fast food and more hurried meals and is the result of compositional as well as behavioural changes. Although the consequences of a decrease in food-related time are beyond the scope of this study, it is likely that this downward trend has important health and social implications. For example, obesity is associated with spending less time in eating as a primary activity (Hamermesh, 2010). Moreover, Putnam (2000) has argued that the reduction of family meals reflects the decline of social capital, and the decrease in actual time spent at the dinner table may also reflect a reduced opportunity for social interaction with family members and friends.

The finding that food-related time declined resonates with previous research (e.g., Warde et al., 2007) and provides further evidence for Gershuny's (2000) contention that home production is substituted by outsourcing. However, it is important to note that the Dutch still spend a substantial amount of time in food preparation and consumption and that the large majority of our sample did not go out for dinner or take-away during the diary week. More importantly, it would be an oversimplification to state that the downward trend in food-related time applies to the Dutch society as a whole. In fact, the main contribution of our study is the finding that the trends in food-related time vary substantially between week and weekend days, as well as across social-demographic groups.

First, the downward trend in food-related time appeared to be more moderate during the weekend: between 1975 and 2005 the time spent preparing food decreased with 12 minutes per weekday, but only 6 minutes per weekend day. The difference between these trends cannot be attributed to the increase in labour force participation, as compositional changes affected week and weekend days to the same extent. Instead the weaker trend in the weekend might indicate that cooking is increasingly taken up as a (time-intensive) hobby. It thus seems that this behavioural change may have attenuated the overall downward trend, which goes to show that preparation and consumption are more than household labour and personal care, but that there is a strong leisure component as well. It is important to note that some individuals may use the weekend to pre-prepare meals for the following week. Although this alternative explanation would not support our 'slow food' thesis, it would support our claim that changes in work demands have made a clear mark on time spent in the home domain.

Second, we found that there were no *general* trends that applied to all socio-demographic groups; the effects differed by gender and household type. For example, whereas Warde et al. (2007) concluded that the gender gap in food consumption increased in the Netherlands, we found that this applied mostly to men and women *with* a partner. Our examination of food preparation revealed that partnered men (with and without children) *increased* and women and single men (with and without children) *decreased* their time in the kitchen. One possible explanation is that single men were less susceptible to changing gender ideologies because they did not have to negotiate about the division of household labour. With regard to *consumption*, childless single men and women stood out: they increased their time, whereas the other groups reduced their time. Possibly, the increase for single men and women reflects a change in the single lifestyle. Because the proportion of single individuals increased, there may be more other single friends available to socialize with over dinner.

Gender differences were less pronounced for food preparation, as well as on weekend days. These findings provide further evidence for the contention that men's increased involvement in household labour is concentrated in more enjoyable activities (e.g., Gershuny, 2000). Moreover, the weekend-week difference is in line with the idea that the meaning and constraints of food preparation depend on its timing. Assuming cooking is more leisurely when more time is available, men's participation will be enhanced most during weekends. This parallels the earlier finding that men's increased involvement in household labour is concentrated in more enjoyable activities (e.g., Gershuny, 2000). A possible explanation for the surprising finding that gender differences in *consumption* became more pronounced, is that women attach greater meaning to meals. DeVault (1991) showed that meals have a high value for women, because it is a form of 'emotional work' through which they can express their ethic of care. Consequently, women may be less susceptible to trends that threaten this time (such as individualization) and more susceptible to trends that would strengthen it (such as the intensification of parenting norms).

Contrary to differences by gender and household type, we found that educational differences remained stable. This stability could imply that higher educated people have increased their *preference* for time-intensive meals (which are relatively healthy and 'slow'), but also faced increasing constraints because their work demands increased. These counter-acting mechanisms may have set each other off. It is interesting to compare these findings with Konrich's (2012) conclusion that those who have most resources to *outsource*, also are most reluctant to do so. Interestingly, we did find a shift for outsourcing. Going out for dinner increases with education and this effect became stronger over time. We also found that higher educated people were less likely to get take-away food in 1980, but higher educated individuals 'caught up'. This could reflect the increasing availability of 'high quality' fast food.

This study has some interesting implications for the literature on shared lifestyles. We found remarkable differences between household types. In 1975, men and women in childless couples spent about the same amount of time consuming, but in the following decades they diverged. For fathers and mothers we also observed an increasing difference over time, suggesting that couples' lifestyles have become more separate. The divergence for parents is more moderate than that of couples without children, which may reflect a selection effect. Having children and sharing lifestyles are both examples of relationship-specific

investments (Kalmijn and Bernasco, 2001). Because childlessness had become more accepted over the last decades (Noordhuizen et al., 2010), couples who are more 'individualized' may have selected themselves into childlessness. Also, changing norms may have made it more acceptable to pursue separate lifestyles. Although only on weekend days, the trend for single men and women is exactly opposite of that for cohabiting men and women, and shows a convergence.

It is important to note that it was the combination of household type and gender that mattered for food-related time. Future time use research on food-related time needs to consider household type and gender simultaneously. For example, by differentiating between household types we found that cohabiting men with and without children increased their time preparing food between 1975 and 2005, whereas single men showed the strongest decrease of all groups. Our findings also suggest that food-related time crosses the borders of traditional time-use categories. Explanations for domestic labour consider gender as the most important determinant of time allocation; these explanations appeared to apply mostly to cohabiters. Explanations for variation in leisure time tend to stress people's intrinsic motivation and lifestyle; these seemed to be most valuable in explaining the difference between the week and weekend and the increase in single men and women's consumption time at the weekend.

Our conclusions should be regarded in the light of this study's limitations: first, the study was restricted to the Netherlands and the results may therefore not generalize to other contexts. Second, we only analysed information on the amount of time, which makes conclusions about the nature of mealtimes more difficult. Importantly, the lack of information on secondary activities made it impossible to analyse trends in food-related time as a secondary activity. Possibly, people (or certain groups) shifted time spent on food from primary to secondary food-related time (e.g. watching television and eating at the same time instead of having a family dinner). Prior research has shown that secondary eating has important health effects. For example, obesity is more prevalent among those who spent *more* time eating as a secondary activity. Perhaps because people are less aware of how much they eat (Bertrand et al., 2009). Future research could also look at the level of enjoyment or stress during the preparation and consumption of food and with *whom* people eat. Third, because the sample size of single respondents was relatively small, especially in earlier years and for single parents, the results should be considered with care. Nevertheless, the growth in the number of singles is interesting in itself because it suggests that this group has become less selective over the years. For example, individuals with active lifestyles may be more likely to be single nowadays and this may explain why food-related time increased among singles. Unfortunately a detailed investigation of these changes lay outside the scope and possibilities of the current study, but future research could analyse the composition and time use of this group in more detail. Fourth, the response rates are relatively low. Low response rates are common in the Netherlands and not surprising considering the time-intensive nature of a time diary. It is important to take this into account when interpreting the results, especially since the busiest individuals are less likely to participate. Because those who are busiest have most time constraints it is likely that we underestimated the downward trends in food-related time, considering the downward trend in response rates over the years.

Concluding, we found that the common societal belief that people have dinner 'on the run' and fast food is taking over needs to be nuanced. Although the overall trends suggest that people decreased their time preparing and consuming food, they still spend a substantial amount of time in these activities, especially at the weekend. Furthermore, we found that certain socio-demographic groups deviated from the overall downward trend. Cohabiting men increased their time in the kitchen and single men and women increased their time at the dinner table. As such, Putnam's claim that families increasingly have dinner 'on the run' really only applies to families. Our findings suggest that food-related time cannot be characterized as solely domestic labour or leisure, but as a combination of the two.

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