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Taht, K.

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Chapter 3

Nonstandard work schedules, couple desynchronization and parent-child interaction: A mixed-method analysis¹

Many children live in households where either one or both parents work nonstandard schedules in the evening, night or weekend. This study tests two competing hypotheses of whether nonstandard schedules result in lower levels of parent-child interaction or in more time with children. Using the first wave of the Netherlands Kinship Panel Study of 1,266 couples with young children and data from semi-structured individual (N=27) qualitative interviews of respondents with children, we engage in a series of ordered logit regression models and qualitative correspondence and narrative analysis. The central finding is that nonstandard schedules are significantly related to an increase in joint activities of parents and children and care-giving for fathers. Qualitative interviews reveal strategies families develop to maintain alternative times and types of contact. Couples use nonstandard schedules to desynchronize schedules to avoid formalized childcare and engage in 'tag-team parenting' to ensure that one parent is always present.

3.1 Introduction

The working patterns of parents have radically changed over the last decades in many modern societies. There has been an overwhelming shift from single- to dual-breadwinner households. Furthermore, both parents not only work more hours, but more importantly, the location of *when* these hours are worked has changed. The rise of 24/7 economies has prompted a growth in nonstandard work schedules, which refers to persons who work outside fixed 9 to 5 schedules: in non-day hours

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(evenings, nights, rotating schedules) and nonstandard days (Saturday and/or Sunday) (Presser, 2003). The result is that more children now live in households where either one or both parents work in the afternoon, evening, night or weekend.

Although there is a substantial body of literature on the negative impact of nonstandard schedules on individual psychological well-being, physical health (Barnett et al., 2008; Jamal, 2004) and the quality and stability of partnerships (Mills & Täht, 2010; Presser, 2000; Weiss & Liss, 1988; White & Keith, 1990; Wooddell, Forsyth, & Gramling, 1994), there is a surprising lack of research into the impact that nonstandard schedules have on children. It is only in recent years that a series of studies have emerged to address this question. This research, however, almost exclusively focuses on the U.S. context and has produced highly mixed results, generating two divergent findings. One set of studies demonstrate that nonstandard schedules result in higher levels of emotional and behavioral problems in children, often generated by heightened levels of stress, guilt or depression among parents (Han et al., 2010; Joshi & Bogen, 2007; Perry-Jenkins et al., 2007; Strazdins et al., 2006). The second body of research finds no conclusive evidence of the negative impact of nonstandard schedules on parenting behavior and children's well-being, with some even pointing to the positive impact that these types of work schedules have on children (Barnett et al., 2008; Han et al., 2010; Han & Waldfogel, 2007). Here the focus is often on the fact that parents actively use nonstandard schedules to spend more time with their children, ensuring that at least one parent is always present with the children (Han, 2004).

These mixed findings create not only a puzzle as to whether nonstandard schedules have a positive or negative impact on children, but generally have the more narrow focus on child behavioral outcomes only. The majority of research examines outcomes in children, such as emotional and behavioral problems (Strazdins et al., 2006; Strazdins et al., 2004) and relates this almost exclusively to parental characteristics (depression, lower well-being). These studies take a large leap by implicitly assuming that nonstandard work schedules fundamentally result in different types of interaction and lower levels of interaction between parents and children, yet fail to examine the actual mechanism of parent-child interaction itself.

The aim of this paper is to examine how different types of nonstandard schedules impact different types of parent-child interaction. To achieve this, we compare differences between those who work regular day and weekday schedules with those in different types of nonstandard schedules by differences in daily family activities (e.g., eating dinner together), time spent with children (e.g., reading, playing, homework, taking to clubs or sports) and the division of child-related care tasks and duties between partners. The majority of previous research has focused on the effect of only mothers' work schedules on children. Some research suggests that an increase in mothers' employment, especially in nonstandard schedules has a positive impact on fathers' involvement in children (Wood & Repetti, 2004) and spurs a subsequent increase in childcare by fathers (Han, 2004). However, less is known about how working nonstandard schedules affects the relationship of fathers with their children. The current study extends existing literature by including both mothers and fathers and examines how the combination of their work schedules impacts parent-child interaction. This use of the household as the unit of analysis and the examination of family time is less common (for exceptions see Carriero et al., 2009; Lesnard, 2008; Nock & Kingston, 1988).

An additional contribution of this study is to extend the – almost exclusively American – literature on the effect of nonstandard schedules on children within another national context. In the United States, nonstandard schedules are often worked in low-level service jobs and by disadvantaged workers (low educated, females, young people, black) (Hamermesh, 1996; Presser, 2003), which may partly explain the negative effect on individuals and family life. Lower cognitive outcomes or risky behavior of children whose parents work nonstandard schedules can be partly assigned to socioeconomic circumstances and lower quality home environments (Han, 2005; Han et al., 2010). The Dutch institutional context is markedly different, with highly regulated nonstandard working times and days, stringent opening hours, considerable protection of employees by unions and collective agreements and a culture of part-time work that is encouraged and offers similar benefits and protection to full-time employees (Mills & Täht, 2010). Studying the effect of nonstandard schedules in a different institutional context allows us to see whether the effect of nonstandard schedules is universal or related to contextual factors.

To examine this question, we use a large quantitative sample of the first wave of the Netherlands Kinship Panel Study (NKPS) (Dykstra et al., 2004) of 1,266 couples with young children and a sample of qualitative interviews from a NKPS Minipanel Study (Mills & Hutter, 2007) of 27 in-depth semi-structured interviews of individuals with children. A combined quantitative and qualitative approach offers a more committed examination of the research question and hypotheses and understanding of the underlying mechanisms and strategies linking nonstandard schedules to parent-child interaction.

3.2 Nonstandard work schedules and parent-child interaction

Research of whether and how nonstandard schedules impact children is highly mixed. A pervasive finding is that nonstandard schedules are 'unsociable' and 'unhealthy', which result in higher depressive symptoms of parents and poorer family functioning that in turn lead to lower levels of parent-child interaction and more social, emotional and behavioral difficulties in children (Desai, Chase-Lansdale, & Michael, 1989; Han, 2005; Han et al., 2010; Strazdins et al., 2004). The argument is that families where at least one parent works nonstandard schedules engage in less physically-present time together, with the nonstandard worker being 'out of sync' with the family (La Valle, Arthur, Millward, Scott, & Clayden, 2002). Parents working nonstandard schedules have been reported to experience 'role overload' (Perry-Jenkins et al., 2007), often accompanied by serious health problems such as higher levels of stress, sleeping and physical disorders that in turn lower their overall level of well-being (Schulz, Cowan, Cowan, & Brennan, 2004). Presser's research (1988, 2003) has linked nonstandard schedules to the erosion of marital relationships. This is signaled by higher levels of conflict, lower satisfaction and changes in family routines. A recent study that included both men and women in The Netherlands found that only women reported higher relationship dissatisfaction when working nonstandard schedules (Mills & Täht, 2010). Perry-Jenkins et al. (2007) demonstrated that mothers and particularly new parents who worked non-day shifts had higher levels of depression and relationship conflict. Strazdins et al. (2006; 2004) provide evidence that children whose parents

work nonstandard schedules have higher levels of emotional and behavioral difficulties such as hyperactivity and inattention, aggression, and separation anxiety. Han, Miller and Waldfogel (2010) found that the type of nonstandard schedule was important with mothers who worked night shifts spending less time with children and having lower quality home environments, which was linked to risky adolescent behavior.

In line with these findings, the underlying hypothesis is that employees who work in nonstandard schedules are exhausted, emotionally and physically unavailable, and have a higher potential to withdraw or be insensitive to other family members or engage in ineffective parenting practices. A shortcoming of this research, however, is that it makes strong assumptions about parent-child interaction, and with the exception of a few studies, often groups all types of nonstandard schedules into one category or only studies shift work. It also neglects the examination of autonomy or actual preferences for working these types of schedules. Although parent-child interaction is generally only insinuated in these studies (and rarely directly studied), it is possible to translate these findings to our first hypothesis: *nonstandard schedules of either one or both of the parents will result in lower levels of parent-child interaction.*

Conversely, a contrasting body of research would lead us to form an opposite and competing hypothesis. We know that households often actively develop strategies to balance childcare, paid work and family interaction (P. E. Becker & Moen, 1999). These strategies may include avoiding jobs that interfere with family duties or the choice of one partner (generally the woman) to adjust her schedule around the family. Couples often actively work to enhance their children's well-being by attempting to provide a maximum amount of parental childcare time (Mennino & Brayfield, 2002). Riley and Glass (2002) show that it is often the preference of parents to share the care of children between them. This option becomes particularly relevant when both partners participate in paid labor. In this sense, nonstandard schedules offer an opportunity to fulfill this need as it allows at least one partner to always be present with the children (La Valle et al., 2002). Presser and Cox (1997) confirm that around one-third of married mothers report working in nonstandard schedules in order to help with childcare arrangements. In one of the few non-American studies of The Netherlands, Belgium (Flanders) and Italy, Carriero, Ghysels & van

Klaveren (2009) recently demonstrated that Dutch couples tend to desynchronize (i.e. decrease work time overlap) to maximize the time each parent is with children, as opposed to the synchronizing of schedules (i.e. increase work time overlap) in Belgium and Italy. Han (2004) demonstrated that many mothers actively switch to working nonstandard hours, with the couple then shifting childcare from institutionalized formal daycare to fathers. Fathers' participation in childcare was likewise greater when both partners worked nonstandard hours. There is therefore growing evidence that nonstandard schedules foster 'tag-team parenting' or 'desynchronization', which would result in higher levels of parent-child interaction. Working different hours may increase parent-child interaction, particularly of fathers who engage in childcare while the mother is working (Averett, Gennetian, & Peters, 2000; Bianchi, 2000; Brayfield, 1995; Riley & Glass, 2002; Yeung, Sandberg, Davis-Kean, & Hofferth, 2001). This leads to a competing hypothesis: *nonstandard schedules will result in higher levels of parent-child interaction, particularly from fathers when either the mother or both partners work nonstandard schedules.*

As touched upon previously, less research has explicitly examined the impact of nonstandard schedules on the type of parent-child interaction. Early studies (Nock & Kingston, 1988) found that parents who work nonstandard schedules spend around 30 (fathers) to 42 (mothers) minutes less per week with their children than those who work standard day schedules. Kingston and Nock (1987) also demonstrated that working nonstandard schedules is negatively related with both partner's time together and the time spent with children. Using couples' time-diary data in France, Lesnard (2008) argues that it is not necessarily a simple measure of one work shift, but what he terms the 'triple synchronization' of the overlapping schedules of the fathers', mothers' and children in the evening when most interaction occurs. Mott et al. (1965) showed that male shift workers had trouble with assuming the father role due to the lack of schedule overlap between their work schedule and the school schedule of their children. However, there appears to be few direct contemporary studies beyond the work of Nock & Kingston (1988), Kingston and Nock (1987), Lesnard (2008), Barnett and Gareis (2007) and Han, Miller and Waldfogel (2010) that examine the different types and the levels of parent-child interaction in more detail. The general focus has been on the

examination of nonstandard schedules in relation to child care (Han, 2004) or a broader variable that examines nonstandard schedules and the amount of time spent with children without specifying the nature of these activities (Davis, Crouter, & McHale, 2006).

Although it is a small sample in one occupation, Barnett and Gareis' (2007) study on parent-child interaction and shift work is an exception in that they directly examine not only the amount of time involved with children, but also the knowledge of the child's activities, disclosure to parents and child's and parent's rating of parenting skills. Using a sample of 55 dual-earner couples where the mother was a registered nurse, they examined the impact that shift work had on parenting behavior and children's well being. The central finding was that mothers' work schedules did not affect the amount of time they directly spend with their children, disclosures from children or ratings of parenting behavior. When mothers worked evening shifts, fathers reported spending more time with children. One conclusion was that the effects of maternal shift work on child outcomes were mediated by the fathers' parenting behavior. Both Nock and Kingston (1988) and Lesnard (2008) also found that 'off-scheduling' has double the effect on mother's time in comparison to father's time. Based on these findings we can derive an additional hypothesis: *when women work nonstandard schedules, men will be significantly more involved in child-care tasks and duties while women will show no reduction in child-care tasks.*

Less change is expected in women's child-care tasks due to the fact that previous research has found that mother's nonstandard work schedule has little impact on the time they spend with their children as it is often planned around children themselves (Barnett et al., 2008; Presser, 1988). Or, as Lesnard (2008) has argued, fathers do not undertake more unpaid work activities even when their work schedules do not coincide with their partners due to the lack of domestic expertise or knowledge of what has to be done in the household or even a refusal to learn these skills.

3.3 Nonstandard schedules in The Netherlands

The prevalence of nonstandard schedules in The Netherlands varies from 11-14 percent in nonstandard shifts only (Breedveld, 1998, 2006) to

around 30 percent in both nonstandard shifts and days (Presser et al., 2008), which has remained stable over the last decades (Breedveld, 2006). Although high in comparison to other European countries (Presser et al., 2008), nonstandard schedules in The Netherlands are less prevalent than in the United States, where American levels are at around 40 percent (Presser, 2003). Similar to the US, nonstandard schedules in The Netherlands are concentrated in particular occupations (nurses, waiters/waitresses, cashiers, police, etc.) often of a lower level (elementary jobs). Weekend work is higher among professionals and managers (Mills, 2004; Presser, 2003), largely carried out by men working overtime.

In contrast to the U.S., where the bulk of research has been conducted to this point, the Dutch context has comparatively strict working time regulations (Jacobs, 2004). Most shops are closed on Sundays and it was only in 1996 that certain stores (primarily grocery stores) were allowed to open beyond 6 pm (Fouarge & Baaijens, 2004). A history of strong labor unions and collective agreements that protect all workers (including non-union and part-time employees) in addition to a supportive welfare state results in the strong protection and compensation for workers (Jacobs, 2004). In fact, the Working Time Law ('Arbeidstijdenwet') of 1996 was specifically aimed at protecting employees against alleged 'unhealthy' working times and inadequate rest periods between working periods and shifts (Fouarge & Baaijens, 2004; de Groot & Ontijt, 1996). Part-time workers also experience similar labor market protection and benefits as full-time workers (Fouarge & Baaijens, 2009), making the combination of part-time nonstandard work hours often an attractive choice. This is in contrast to the modest working-time regulations in the American context, where the majority of research on this topic has been conducted (Gornick & Meyers, 2003). In the United States, relatively few protective measures for nonstandard workers are available (Hamermesh, 1996) and part-time work arrangements often mean financial penalties or lack of benefits making it a marginal form of employment (Visser, 2002). Dutch nonstandard schedule employment does not necessarily fall into the category of 'bad jobs' (Kalleberg et al., 2000) or a nonnegotiable job condition, which is often the case in the U.S. (Perry-Jenkins et al., 2007).

The findings until now may therefore reflect a broader labour market and industrial relation system of the U.S. as opposed to solely the impact of

nonstandard schedules (Mills & Täht, 2010). We also consider the level of autonomy in choosing schedules and expect that nonstandard schedules may not only be employer driven, but also a choice of parents. The very ability to choose, institutional protection and cultural acceptance of nonstandard schedules may buffer the negative effects these schedules have on parent-child interaction and family solidarity, leading to the hypothesis that in the Dutch context: *nonstandard schedules will have a insignificant negative or even positive effect on parent-child interaction.*

Institutional features and cultural norms in The Netherlands encourage and reinforce the predominance of part-time work, especially among women and mothers. In 2003, about 64 percent of Dutch women were employed, consisting of 75 percent part-time workers, compared to the European average of 25 percent (OECD, 2006) or 18 percent in the U.S.. The standard Dutch family structure is the 'one-and-a-half' earner model (man full-time, woman part-time) or a male-breadwinner model (man full-time, housewife), with only 15 percent of couples categorized as full-time dual-earners (van Gils & Kraaykamp, 2008). Part-time work for mothers is also reinforced by the school system, with elementary school-aged children generally having one to two afternoons free per week and in many cases return home for lunch each day, demanding intensive parenting or reliance on often expensive and scarce after-school care. There is also an apprehension towards full-time working mothers and strong norms against more than two days of formalized day-care. In a national study, Portegijs et al. (2006) found that 61 percent of households with children under 12 used no kind of (in)formal childcare. When parents did use childcare, the average was around two days a week. Most of the parents interviewed agreed that it was better for children to be cared for by their own parents, with 75 percent finding that formalized day care should be one to a maximum of two days a week. In line with previous research (Carriero et al., 2009; Deutsch, 1999), this demonstrates the importance that parents in The Netherlands give to exclusive parental (generally mother) care, particularly for infants. Within this context, women tend to arrange their working life around the needs of children. We therefore hypothesize that *irrespective of which parent works nonstandard schedules, the effect of nonstandard schedules will have a stronger positive effect on father's parent-child interaction than for mothers.* This is also attributed to the fact that

women spend more time in child-care and interacting with children than men (see e.g. Lesnard, 2008).

3.4 Data and method

These research questions are examined by using a mixed-method approach that employs a large-scale quantitative dataset of couples combined with in-depth open interviews. This empirical design contributes to existing research by using a larger representative sample of workers engaged in nonstandard schedules, engages in a couple-level analysis, and derives information from both quantitative and qualitative data.

3.4.1 Data

3.4.1.1 Quantitative data

The quantitative data is drawn from the first wave of the Netherlands Kinship Panel Study (NKPS) (Dykstra et al., 2004), which contains a large amount of life-history information, including information on nonstandard work schedules and activities with children and other family members. The NKPS is a multi-actor, multi-method panel study, with data in the first wave available from 2002-2004. The data is collected from a random sample of individuals within private households in The Netherlands, aged 18 to 79. 8,161 main respondents were interviewed face-to-face. Respondents and their family members (including partners) were also asked to complete an additional self-completed questionnaire, which provides us with the necessary information on the working schedules, frequency and type of parent-child interaction as well as activities concerning child-care. Since detailed working schedule information of both respondents and their partners is available only in the self-completed questionnaire, our sample is restricted to couples where both partners filled it in. We therefore use reported data from both the main respondent and his or her partner.

5,165 respondents reported having a co-residential heterosexual partnership. The sample was further reduced due to the fact that the self-completion questionnaire was filled in by 4,702 (91%) of main respondents and 3,863 (74.8%) of their partners. Further missing data is related to the exact measure of working schedules where the necessary information was

available for 4,579 (88.7%) of respondents and 3,794 (73.5%) of the partners. The sub-sample was reduced by an additional 765 cases (14.8%) due to our restriction that at least one of the partners had to be employed a minimum of 12 hours a week. After excluding the schedule-related missing cases, we are left with 2,820 couple-cases. After selecting the households with children where at least one of the children is under the age of 12, the final sample was reduced to 1,266 couples.

3.4.1.2 Qualitative data

The qualitative data comes from the NKPS Minipanel Nonstandard Working Times and Partnership Quality and Stability (Mills & Hutter, 2007), consisting of individual level interviews with 34 individuals in 2006. The total sample consisted of 16 still intact couples (i.e., 32 respondents) and 2 respondents who had experienced the dissolution of their partnership by the time of the qualitative interview. Of the 16 intact couples, it was possible to interview 14 of these couples individually. In the remaining cases, it was either possible to interview one partner or in two cases, the previous relationship had been dissolved. As the description of the qualitative sample in Table A3.1 of the Appendix shows, it was possible to obtain information about the missing partner information from either the quantitative data and/or the individual interviews. The analysis for this paper relies only on interviews of respondents with children, reducing the sample to 27 individual-level interviews.

A purposive sampling strategy was adopted to select a theoretically driven sample from the first wave of the NKPS quantitative data where the quantitative analyses is conducted (Marshall & Rossman, 1999). Selection was based on both the dependent variables (presence of children; arrangement and division of child-care and rearing activities in the family) and the key independent variables (type of work schedule, age of children, gender). Whereas the quantitative data used random sampling to build a nationally-representative sample, the qualitative data relied upon theoretical sampling where the goal was to extend and refine our theoretical expectations and constructs until we reached theoretical saturation (Auerbach & Silverstein, 2003). The interviews were directly transcribed and then analyzed during data collection and we continued to sample cases until we reached a point of theoretical saturation, or in other

words, where our theoretical expectations and constructs were no longer challenged. Individual interviews took place from February to June 2006 in respondents' homes, with partners interviewed separately. Different interview formats were used for respondents working nonstandard schedules and their partner (who might or might not have been employed). The topics were developed based on previous research, but also to probe into results that were difficult to interpret from the quantitative analysis. The qualitative interviews were conducted three years after the quantitative survey, taking on a decidedly longitudinal nature and allowing us to interview individuals who had left or changed their type of nonstandard schedules or re-evaluated their previous perceptions or interactions with children.

3.4.2 Measures

Parent-child interaction is operationalized in the quantitative analysis via various measures that help to capture the multidimensional types of joint parent-child activities and interaction. Firstly, we examine the *number of family dinners* that a respondent reports having together with their partner and children during a typical workweek. *Activities carried out with children* is measured using a four-item-scale ($\alpha = .60$), that includes the frequency of being engaged in the following activities in the past week: reading to child(ren); playing board games, spending time at the computer, drawing; helping child(ren) with homework; and taking child(ren) to sport activities or clubs. The item refers to respondent's/partner's self-assessed personal time spent with children. *Division of child-rearing tasks between partners* is measured using a three-item-scale ($\alpha = .81$) that consists of: staying at home if the child is ill; getting out of bed at night; and taking the child(ren) to school, day care or a babysitter. The item refers to division of child-rearing tasks between partners assessed by the respondent/partner.

The *nonstandard working schedule* variable is constructed from the actual working hours of the week prior to data collection. For this reason, our quantitative data does not allow us to separate the category of nonstandard schedules workers who work (weekly) rotating shifts. For the classification, we use the standard majority definition where at least half of the hours worked most days in the prior week must fall outside 08:00 and 16:00 (Presser, 2003). In other words, when the majority of the hours fall

between 08:00 and 16:00, the person is regarded as working in a fixed day schedule. When it is between 16:00 and 24:00, in a fixed evening schedule and when it is between 00:00 and 08:00, they are categorized as in fixed nights. When no dominant pattern in nonstandard working time could be observed, the person is classified as working varying hours. As emphasized by Presser (2003), it is crucial to differentiate between nonstandard shifts and days. Therefore, non-day working times such as evening, night or varying hours is considered nonstandard shift work (and in our analysis treated as one category), while working in fixed day shifts in the weekends (Saturday, Sunday) is considered nonstandard day work.

Next to the working schedule of both partners, we also control for the number of hours worked, differentiating between no work (not working or less than 12 hours a week), part-time (12-35 hours a week) and full-time work (more than 35 hours a week). To control for the joint effect of partner's schedule arrangements on parent-child interaction, we composed a categorical variable that indicates the couple's working time arrangements based on both partners' work schedules and times. Knowing the respondent's and partner's schedule type and whether it is a part- or full-time arrangement allows us to differentiate between 48 different hour-schedule combinations (for all combinations, see Appendix Table A3.3), which has been collapsed into the 13 most dominant categories (shown in Tables 3.1 to 3.3).

Control variables include: household characteristics (age, education and socio-economic status of the family) and family characteristics (marital status, number and age of children living home). Our underlying assumption is that married couples will have a more traditional division of labor and family-oriented norm, which will translate into more time with children, particularly for women in male-breadwinner households. Socio-economic status is measured using the International Socio-Economic Index (ISEI) (Ganzeboom et al., 1992). We also include the autonomy in choosing workdays and hours.

3.4.3 Analytical techniques

The quantitative analysis applies an ordered logit regression model to avoid losing information that would occur from collapsing or dichotomizing scales. These models are not sensitive to the variable distribution in the

way that OLS regression models are and permit us to analyze variables with a skewed distribution (Long, 1997; Winship & Mare, 1984). Due to our expectations about gender differences, combined with evidence also shown in previous studies and an initial examination of the data, we run separate models for men and women while comparing the differences between sexes in parent-child interaction. As for the number of family dinners together during a workweek, the count is the same for all family members as opposed to the time spent in child-care activities, which is measured at individual level, which permits us to look at the differences between men and women.

We also ran multi-level dyadic (random effect) models, which did not lead to substantively different conclusions. We opted for the individual- or gender-level analysis presented here firstly due to fact that previous research and initial analyses demonstrated that the impact of nonstandard work schedules on parent-child interaction is strongly influenced by the gender of the parent. Secondly, since family dinners were measured at the couple level, a multilevel model was not appropriate for this analysis. Finally, the central independent variable of interest is the schedule combinations between couples, which consist of household types according to partners' schedule type combinations. This variable is therefore also constant across couples and not useful in a multilevel framework.

The qualitative analyses combine narrative analysis with summarizing graphical techniques to bring out themes and contrasts. The narrative analysis consisted of close readings of the transcribed interviews by first defining general categories (e.g., reason for working nonstandard schedules) and then investigating the relationship between these categories with respect to characteristics of the respondents (e.g. sex, type of nonstandard schedule, combination of couple working times) (Denzin & Lincoln, 2003; Strauss & Corbin, 1990). This type of detailed reading and interpretation of the data permitted us to isolate narratives that exemplify certain points or associations. We developed formal coding procedures with multiple coders and first created a common coding scheme and codebook. We then engaged in the computer-assisted summarizing technique of correspondence analysis using QDA Data Miner (Peladeau, 2007). This technique, which was developed in the early 1970s by a French linguist (Benzecri, 1973), visually represents relationships between codes,

themes and individuals' characteristics within the data. It uses algebraic methods to reduce the complexity of dimensions of the coded categories and displays them in a visual matrix that shows their association in two or more dimensions. This approach has the advantage of reducing the complexity of the coded categories and ordering them by showing their association by clustering them in a visual matrix, which enhances the interpretation of data (figures available upon request).

3.5 Results

3.5.1 Descriptive results: Nonstandard schedules in The Netherlands

Before focusing on the hypotheses, it is useful to first examine patterns of nonstandard schedules among co-residential couples in The Netherlands. Table A3.2 in the Appendix provides a description of couples' work schedule combinations (by working hours and schedule type) across different types of households.

The top panel of Table A3.2 shows various schedule combinations, with the most dominant being both partners working standard schedules (35.9 percent), followed by the male partner in a standard schedule and the female partner not working (23.3 percent). A considerable number of households (in total 36.2 percent) have one or both partners working in nonstandard schedules (shifts or days). Within this group, the dominant pattern is the male partner working nonstandard days (weekend work) and his partner in a standard schedule (8.2 percent) or is not employed (6.2 percent). Table A3.2 also shows differences in couples' schedules according to the presence of children. Compared to households without children, there is a considerably higher share of men working standard schedules and women in nonstandard shifts among households with young children (a shift from 2.9 to 6.7 percent). There is likewise an increase in schedule combinations with men working nonstandard days and women in nonstandard shifts (a shift from 0.6 to 2.0 percent). This suggests the practice of tag-team parenting via the use of nonstandard schedules.

Not only the combination of the schedule, but also the combination with the number of hours is important in The Netherlands, which is shown in the bottom panel of Table A3.2. This echoes the previous discussion of

the predominance of part-time work and the one-and-a-half earner family model (37.4 percent of couples) and the male-breadwinner model with men working full-time and women engaged as a homemaker (27.8 percent of couples). Around 15 percent are full-time dual-earners and even in couples without children, only 29.2 percent of couples both work full-time. Again, we also see similar patterns of schedules divided by those with and without children. The table illustrates that having children results in an adjustment of schedules and work hours into predominantly the male partner working full-time and women working part-time.

Also of interest is how couples combine their working times and schedules together, summarized in Table A3.3 in the Appendix. Focusing on nonstandard schedules, a dominant pattern is a desynchronization of partners' schedules where one of the partners works in a standard schedule, while the other engages in nonstandard shifts or days, a finding also recently confirmed as a unique feature of the Dutch context (Carriero et al., 2009). This desynchronization strengthens with the arrival of children in the family to operate as tag-team parenting. Many of the nonstandard schedules (especially shifts) are worked in a part-time arrangement, which likely serves as a 'buffer' for potentially negative physical, psychological and social effects of this type of work.

3.5.2 Family dinners

Table 3.1 presents the results of the ordered logit regression for predicting the frequency of family dinners together. Working nonstandard schedules appears to reduce the opportunity of family dinners. In households where both partners work nonstandard schedules (either in part- or full-time) there are fewer joint family dinners than in the 'standard' Dutch one-and-a-half-earner families. There are also significantly fewer family dinners when the male partner works nonstandard days and his partner works standard hours, regardless of whether they work part- or full-time hours. Particularly for males, being involved in nonstandard schedules makes them less likely to have dinners together with the entire family. As discussed previously, weekend employment is often related to overtime work and we can speculate that those men who work in the weekends also miss family events during the week. Although not significant, a higher autonomy in choosing working hours is related to men and women

participating more in family dinners. This is likely related to the fact that the ability to choose days and hours is highly related to being in a higher-level professional occupation and engaging in more overtime, which is related to fewer family dinners.

Table 3.1 Summary of ordered logit regression analysis for variables predicting the frequency of family dinners together, odds ratios

Predictor	Respondent's household	
	e ^B	Wald
Family characteristics		
<i>Number of children living home</i>	0.94	1.16
<i>Child aged 4 - 12 years (Ref = <3)</i>	0.91	0.59
<i>Child aged 12+ years (Ref = <3)</i>	0.78*	4.75
<i>Married (Ref = cohabitation)</i>	1.40**	7.70
Couples' work schedule combinations		
<i>Male NW; Female NS shift/day PT/FT</i>	2.56	1.42
<i>Male NW; Female S PT/FT</i>	2.29	1.45
<i>Male NS shift/day PT/FT; Female NW</i>	0.94	0.01
<i>Male S PT/FT; Female NW</i>	1.45	0.35
<i>Male/Female NS shift/day PT/FT</i>	0.39**	28.96
<i>Male NS shift PT/FT; Female S PT/FT</i>	0.69	2.25
<i>Male NS day PT/FT; Female S PT</i>	0.62**	8.62
<i>Male NS day PT/FT; Female S FT</i>	0.17**	15.26
<i>Male S PT/FT; Female NS shift PT/FT</i>	0.37**	31.83
<i>Male S PT/FT; Female NS day PT</i>	0.82	0.81
<i>Male S PT/FT; Female NS day FT</i>	0.52*	4.29
<i>Male S PT/FT; Female S FT</i>	0.75	1.74
<i>Male S PT/FT; Female S PT (Ref)</i>		
Respondent's autonomy in choosing days/hours	0.97	0.76
Partner's autonomy in choosing days/hours	0.97	0.76
Nagelkerke Rsq		0.06
N		1,260

Data: NKPS 2002-4; Authors' calculations

Note: Sample: couples, where at least one is working, at least one child younger than 12 years is living in the household. Total N = 1,266 couples. Dependent variable: number of dinners together during working week: 0 – never, 1 – 1 day a week, 5 – five days a week assessed by the respondent/partner. Model controls for gender, partners' education, socio-economic status, age.

Abbreviations: NW – not working or working less than 12 hours a week; PT – part-time work (12 -35 hours a week); FT – full-time (more than 35 hours a week); NS shift – nonstandard shifts (fixed evening, night, hours vary); NS day – nonstandard days (working in Saturdays/Sundays, day hours only); S – standard schedule (fixed day schedule, in weekdays only)

+p <0.10. *p<0.05. **p<0.01. Wald = (B/SE)² (compared with a χ^2 distribution with 1 DF)

The results provide some support for the first hypothesis, which predicted a reduction of family-child interaction (i.e., family interaction where both parents are present) when parents work nonstandard schedules, particularly at 'social' times. Here we see fewer possibilities for family dinners when mothers work fixed evening/nights or fathers work on the weekend. The qualitative analysis, however, forces us to reevaluate the validity of whether our one-item measure of number of family dinners together adequately captures family interaction. Throughout the interviews, individuals explained strategies they developed to eat or spend time together at least once during the day, such as moving the standard family evening dinner to lunchtime.

If he has an afternoon shift then I make a hot meal for lunch....then we eat dinner. My daughter comes home at lunch from elementary school and also joins us.

(Female, housewife of rotating shift worker)

Whereas the quantitative analysis that focused on the frequency of family dinners shows less family interaction, the qualitative interviews illustrated multiple strategies to overcome this obstacle, by replacing dinners with other group family moments such as a joint breakfast, lunch, walk or additional activity at an alternative time. It became clear that respondents were often masters of their own schedules, actively planning, rationally focusing on schedules and timetabling family time into their calendars. Virtually every house had a detailed family calendar either on the wall or in an agenda, where work schedules and activities were often meticulously planned.

The family agenda is hanging there. I coordinate most of the appointments on that agenda with my own.

(Male, rotating shifts, part-time employed partner)

You need to plan meetings around birthdays. If you don't you are hostage to your planner, like this week where from the seven nights I am gone for six of them and that is the type of game that you need to play.

(Male, irregular work times, partner housewife)

3.5.3 Time spent with children

Table 3.2 shows the results from the ordered logistic regression models of the effect of nonstandard schedules on personal time spent with children. Recall that our second hypothesis anticipated that nonstandard schedules would actually increase parent-child interaction, especially for fathers, which is largely supported. It appears that in the Dutch case, working nonstandard schedules significantly increases participation in activities with children, particularly for fathers. This occurs particularly within certain schedule combinations: father nonstandard/mother homemaker, father nonstandard/mother standard schedules; and father standard/mother part-time on nonstandard days. Although it is not significant, for mothers, we observe a positive relationship with time spent with children when they work nonstandard shifts in combination with their partner's standard schedule.

Table 3.2 also demonstrates that when women engage in nonstandard work (both shifts and days), fathers were more involved in various activities with children. This, however, was not significantly higher than for fathers who worked standard schedules. For women, the effects are rather modest and insignificant.

The narratives of nonstandard schedule workers and their partners during the in-depth interviews provide insights into why fathers might be more involved with their children. As one father who worked irregular hours stated: "If I am free, that means that I am simply at home and I can take care of the children." Fathers (and their partners) in particular argued that nonstandard schedules allowed them to be more involved with their children.

The advantage of the night shift is that I am home in the morning for the entire week. That means that I can help my wife with the children. Just take the girls to school or pick them up, and that we can have a hot meal together here at lunch.

(Male, fixed night shift worker, partner part-time)

An advantage of irregular work times is that I have three children, two twin boys and the second of the twins was born with brain damage...he was heavily disabled and because of the irregular work

times I could spend a lot of time with him....and that has in fact brought him to where he is now and that goes very well.

(Male, rotating and irregular shifts worker, partner housewife)

However, not all fathers were positive about their situation, particularly the men who worked numerous overtime hours or during the weekend. This is likely related to the previous findings in Table 3.1 that demonstrated that these men often missed family dinners.

...I don't like it because during the week they [children] are in school. Like now, I am free but they are in school. In the weekends when I have to work the children are free. But yes, it is always give and take. One time maybe I'll have more time to spend with them.

(Male, shift and weekend worker, with young children)

The last columns of Table 3.2 test for significant differences between the sexes and shows that there is not a significant difference between men and women in terms of how the household working time arrangements affect the time spent with children. Fathers spend significantly more time with children when both partners are working nonstandard schedules, or when fathers work nonstandard shifts and mothers are in standard schedules. This is also the case, however, when mothers work part-time nonstandard days and fathers are in standard schedules. As mentioned previously, this is likely attributed to the fact that mothers spend more time in general with children. Furthermore, as shown in previous quantitative studies, many mothers do in fact arrange their work schedules around children or in the Dutch case drop out of the labor market entirely, repeatedly confirmed in the qualitative interviews. The pressure for women to reduce hours or pull out of the labor market is also very strong.

I made a decision to stop working when the children came. When the youngest turned 6 I started to work again during the hours that they were at school.

(Female part-time worker, partner night shift worker)

Table 3.2 Summary of ordered logit regression analysis for variables predicting time spent with child(ren), odds ratios

Predictor	Male Respondent		Female Respondent		Females differing from males	
	e ^B	Wald	e ^B	Wald	e ^B	Wald
Family characteristics						
<i>Number of children living home</i>	1.28**	12.14	1.27**	11.89	0.99	0.01
<i>Child aged 4 - 12 years (Ref = <3)</i>	1.78**	14.42	2.69**	38.71	1.49+	3.38
<i>Child aged 12+ years (Ref = <3)</i>	0.47**	26.73	0.32**	56.46	0.69+	3.08
<i>Married (Ref = cohabitation)</i>	1.27	2.13	1.67**	10.25	1.31	1.43
Couples' work schedule combinations						
<i>Male NW; Female NS shift/day PT/FT</i>	0.68	0.11	2.14	0.41	3.02	0.43
<i>Male NW; Female S PT/FT</i>	0.47	0.45	2.90	0.92	5.81	1.25
<i>Male NS shift/day PT/FT; Female NW</i>	20.97*	5.27	2.84	0.63	0.13	1.21
<i>Male S PT/FT; Female NW</i>	17.34*	4.70	1.96	0.26	0.11	1.44
<i>Male/Female NS shift/day PT/FT</i>	1.34	1.53	0.72	2.00	0.53+	3.64
<i>Male NS shift PT/FT; Female S PT/FT</i>	2.67**	8.93	1.15	0.19	0.43+	3.53
<i>Male NS day PT/FT; Female S PT</i>	1.00	0.00	0.79	1.33	0.78	0.71
<i>Male NS day PT/FT; Female S FT</i>	0.71	0.26	0.40	2.07	0.56	0.39
<i>Male S PT/FT; Female NS shift PT/FT</i>	1.18	0.48	1.09	0.12	0.92	0.06
<i>Male S PT/FT; Female NS day PT</i>	1.89*	5.47	0.97	0.01	0.51+	3.00
<i>Male S PT/FT; Female NS day FT</i>	1.12	0.07	0.72	0.60	0.65	0.52
<i>Male S PT/FT; Female S FT</i>	0.90	0.14	0.40**	9.67	0.44*	3.88
<i>Male S PT/FT; Female S PT (Ref)</i>						
Respondent's autonomy of days/hours	1.05	0.73	0.97	0.27	0.92	0.85
Partner's autonomy of days/hours	0.86*	4.90	0.95	0.82	1.11	1.38
Nagelkerke Rsq	.08		.15		.17	
N	1,246		1,257		2,503	

Data: NKPS 2002-4; Authors' calculations

Note: Sample: Couples, where at least one is working, at least one child younger than 12 years is living in the household. Total N = 1,266 couples. Dependent variable: mean of respondent's/partner's self-assessed frequency of doing following activities with child(ren) in the past week: reading to them; playing board games, spending time in computer; help them with homework; take them to sport activities or clubs. Measured on scale: 1 - not at all; 2 - few times; 3 -often. Scale: $\alpha = .60$. Model controls for parents' education, socioeconomic status, age.

Abbreviations: NW - not working or working less than 12 hours a week; PT - part-time work (12 -35 hours a week); FT - full-time (more than 35 hours a week); NS shift - nonstandard shifts (fixed evening, night, hours vary); NS day - nonstandard days (working in Saturdays/Sundays, day hours only); S - standard schedule (fixed day schedule, in weekdays only)

+p <0.10. *p<0.05. **p<0.01. Wald = (B/SE)² (compared with a χ^2 distribution with 1 DF)

She was always involved. At school with the Parent's Board and that sort of thing, she always had time for it...She was always there, because the dual-earners, you know, they don't have time for children.

(Male, rotating shifts, partner housewife)

...I couldn't live without work. No, you wouldn't want to put me at home for seven days alone in the house with the children. That would be war. But people often say to me: "Wow, you have children and you still work 27 hours [a week]!". Then I think yes, but I am still a good mother.

(Female, rotating shift work, partner full-time)

Parents discussed the importance of one parent always being present and intentional desynchronization of schedules, which involved not only the adjustment of mother's but also father's schedules and the importance of joint scheduling.

It's good that you can make a lot of time free for your family and also be competitive [at work] because you can spread your 38 hours of work over 24 hours a day so to speak.

(Male, rotating shifts, part-time employed partner)

When I started to work there, then we made the agreement, if the children come, then we both want to work four days [a week]. That was good and then when [name son] came, then I said: "I am going to work four days". I was one of the first there; especially for a man it was strange. But to this day they have never said no to a free day.

(Male, standard days, partner part-time rotating shift work)

In the analysis we also controlled for marital status based on the expectation that being married would result in a more 'traditional' division of labor, with married women more likely to stay at home with their children, have a more traditional division of child-care and rearing tasks, and be more engaged in activities with children. Our results confirm this

expectation – married women spend more time in activities with children compared to those who are not married. For men, the frequency of playing, reading, doing sports, and other activities does not significantly differ between married and cohabiting couples. We also anticipated that higher autonomy in choosing days and hours would lead to a better ability to engage in activities with children, which for reasons already outlined earlier (i.e. autonomy often means a higher professional job), does not appear hold.

The qualitative interviews bring additional nuances to our understanding of how nonstandard schedules might impact parent-child interaction. Night shift workers suggested that their work led to tiredness and irritability, which in turn resulted in limited, sometimes negative, but often ‘adapted’ interaction with their children. As with family dinners, parents and children appeared to learn how to adapt, with one night shift worker explaining the reason for his or her irritability or asking children to be quiet to allow them to sleep.

I would always say to the kids ‘Daddy worked the night shift’. Then they would take it into account....because you are irritated much faster. I think it is because of the biorhythm and the switches.

(Male, shift and weekend work, housewife)

The narratives also offered an additional window into understanding the relationship between nonstandard schedules and autonomy in choosing one’s working times. There were distinct differences in the interviews of those who felt that they were ‘forced’ to work nonstandard schedules compared to those who actively chose to do so. As one male factory worker stated:

You have to do it...in terms of money it is really good, but in terms of family...the one time the children see their dad and then the other time they see their mom. I don’t like that much myself.

(Male, shift worker, partner full-time shift worker)

3.5.4 Division in child-care tasks

In relation to participation in child-care tasks, our expectation was that when women were employed in nonstandard schedules, men would be

significantly more involved in child-care tasks and duties, whereas women would show no reduction in child-care tasks. The results from the regression analysis (Table 3.3) provide mixed support, with several unexpected results.

First, it is the combination of work schedules, and particularly when men are in nonstandard schedules, that are pivotal. When fathers are in nonstandard shifts and mothers in standard schedules, fathers are significantly more likely to engage in more child-care related tasks, thereby reducing the mother's workload. This is contrary to our expectations that women's tasks would not be reduced. Fathers working nonstandard shifts significantly increase their participation in daily child-care tasks such as taking kids to day-care or school and taking care of children when they are sick when they work both in nonstandard shifts and days. Turning to the last column of Table 3.3, we also observe significant differences between men and women in these schedule arrangements. This higher parent-child interaction and participation of fathers who worked nonstandard schedules in household tasks was echoed in the qualitative interviews.

A mother's schedule has a significant impact on how often her partner is engaged in practical care tasks, and more often when women work full-time. This partly supports our expectation about the traditional family model of women being the primary caregivers and arranging their time more around others, especially children. However, it may be also that the minority of Dutch couples that both work more hours engage in more 'outsourcing' of childcare activities, which we are not able to test here.

Turning to the qualitative interviews, respondents in nonstandard schedules expressed difficulties, guilt and regret about the inability to engage in activities with their children, particularly during the weekend. Yet it also appears that families developed coping strategies and rationalizations to deal with their situations.

The children don't know anything else than the fact that I am a shift worker. They don't know what a normal father is [laughs]...You know? Not the normal times, they don't know anything else....in the weekend, my son goes to sports, then it is difficult to go with him, you can just forget those sort of things.

(Male, shift worker, partner housewife)

Others acknowledged these problems but argued that nonstandard schedules were a 'necessary evil' to avoid putting children into formalized childcare. This supports previous research that has found that parents have a clear preference to care for their own children if possible (Mennino & Brayfield, 2002; Riley & Glass, 2002) and use nonstandard schedules as a tactic to do so (Han, 2004).

...the only disadvantage, yes, that is the weekends, but it is practical in terms of childcare, you know. But I find it a disadvantage sometimes, you know. I would like to only work one weekend in the month, but for childcare this is simply the handiest. And for the children, that is who we live for, that is what we do this for.

(female, rotating shifts, husband full-time)

We also make sure that one of us is always available. If I need to work then I make sure that [name husband] is there. We always try everything so that the children never have to suffer.

(female, rotating shifts, husband full-time)

Using the qualitative data, in a correspondence analysis (available upon request) we examined the type of work schedule by division of child-related care tasks. We found that working either night shifts or variable hours is clearly related to narratives surrounding tiredness and irritability and less time with children. What also emerges, however, is that the father (or his partner) working night or rotating shifts often mentioned that men were more able to help daily child-care duties such as, taking them to school, preparing meals and engaging in housework.

Table 3.3 Summary of ordered logit regression analysis for variables predicting the division of child-related care tasks/duties between partners, odds ratios

Predictor	Male Respondent		Female respondent		Females differing from males	
	e ^B	Wald	e ^B	Wald	e ^B	Wald
Family characteristics						
<i>Number of children living home</i>	0.94	0.57	1.00	0.00	1.06	0.30
<i>Child aged 4 - 12 years (Ref = <3)</i>	0.77 ⁺	2.66	1.23	1.58	1.60*	4.20
<i>Child aged 12+ years (Ref = <3)</i>	1.03	0.03	1.01	0.00	0.98	0.01
<i>Married (Ref = cohabitation)</i>	0.86	0.80	0.91	0.32	1.07	0.07
Couples' work schedule combinations						
<i>Male NW; Female NS shift/day PT/FT</i>	0.06*	4.53	5.24	1.78	82.76**	6.06
<i>Male NW; Female S PT/FT</i>	0.14 ⁺	2.77	2.30	0.52	17.85 ⁺	3.01
<i>Male NS shift/day PT/FT; Female NW</i>	2.75	0.51	0.47	0.30	0.17	0.82
<i>Male S PT/FT; Female NW</i>	1.96	0.23	0.60	0.14	0.30	0.38
<i>Male/Female NS shift/day PT/FT</i>	1.39	1.72	0.97	0.02	0.69	1.10
<i>Male NS shift PT/FT; Female S PT/FT</i>	3.58**	13.58	0.43**	6.73	0.12**	20.05
<i>Male NS day PT/FT; Female S PT</i>	0.99	0.00	1.33	1.73	1.35	0.93
<i>Male NS day PT/FT; Female S FT</i>	4.30*	4.29	0.44	1.51	0.10*	5.59
<i>Male S PT/FT; Female NS shift PT/FT</i>	0.67	2.39	1.16	0.36	1.75	2.36
<i>Male S PT/FT; Female NS day PT</i>	0.77	0.78	1.29	0.77	1.67	1.56
<i>Male S PT/FT; Female NS day FT</i>	0.62	1.09	1.13	0.08	1.81	0.89
<i>Male S PT/FT; Female S FT</i>	2.71**	10.09	0.29**	15.91	0.11**	25.63
<i>Male S PT/FT; Female S PT (Ref)</i>						
Respondent's autonomy of days/hours	1.24**	13.60	1.08	1.36	0.87	2.25
Partner's autonomy of days/hours	0.92	1.54	0.87**	6.64	0.95	0.38
Nagelkerke Rsq	.17		.16		.60	
N	1,238		1,249		2,487	

Data: NKPS 2002-4; Authors' calculations

Note: Sample: couples, where at least one is working, and at least one child younger than 12 years is living in the household. Total N = 1,266 couples. Dependent variable: mean of respondents estimation on who does usually the following activities: stay home when child is ill; take the child to school, day care, babysitter; talk to child. 1 – always partner, 2 – usually partner, 3 – equal; 4 – usually respondent; 5 – always respondent. Scale $\alpha = .81$. Model controls for parents' education, socio-economic status, age.

Abbreviations: NW – not working or working less than 12 hours a week; PT – part-time work (12 -35 hours a week); FT – full-time (more than 35 hours a week); NS shift – nonstandard shifts (fixed evening, night, hours vary); NS day – nonstandard days (working in Saturdays/Sundays, day hours only); S – standard schedule (fixed day schedule, in weekdays only)

+p <0.10. *p<0.05. **p<0.01. Wald = (B/SE)² (compared with a χ^2 distribution with 1 DF)

Another finding emerging from the interviews is that nonstandard schedules appeared to be a way to avoid formal childcare. When nonstandard hours become too varied, however, formalized childcare was very difficult to realize. A prominent narrative from Dutch mothers was an aversion to and pride of not using public childcare.

...if the mother goes to work and then also takes the children to the daycare or the after school care, I just simply find that too long for a child. Just because mom has to work they have to sit there with so many children again.....My children don't ever have to go to any sort of care at their lunch break or anything else because there is always someone from our own family around....I find it a 'must'.

(Female, housewife, partner full-time rotating shifts)

I find it strange that you would want children and then not care for them. It is our children and we care for them as much as possible ourselves.

(Female housewife, partner full-time irregular shifts)

The importance of having at least one parent or family member (e.g. grandparent, sibling) at home to care for the children was a central narrative throughout these interviews of both men and women, providing support that nonstandard schedules indeed appear to be a way for parents to actively desynchronize and engage in 'tag-team parenting'.

3.6 Discussion

This study applied a multi-method approach to examine the impact of nonstandard schedules on parent-child interaction, including activities together with children and the division of child-care and rearing related tasks between parents. The study explored two competing hypotheses that were derived mainly from the existing – almost exclusively American – literature. The first was whether nonstandard schedules resulted in lower levels of parental interaction (often attributed to role overload, emotional and physical stress). The second opposing hypothesis was that parents use

nonstandard schedules in order to spend more time with children, avoid formal childcare and ensure that one parent is always present, resulting in more parent-child interaction, particularly from fathers. We explored these hypotheses in the Dutch context using mixed methods from a large quantitative survey sample of couples (N=1,266) and qualitative semi-structured in-depth interviews (N=27). We also noted that The Netherlands is a very different context from the U.S., where previous findings are largely based; due to its more protective labor market and industrial relations systems, more stringent opening hours and worker regulations.

Our findings provide more pronounced support for the second stream of literature. We see that the likelihood of working nonstandard schedules is related to having children, especially for women, but also for men. Qualitative interviews showed that it was a conscious choice to desynchronize and combine work and family via nonstandard schedules. Nonstandard schedules allow couples to arrange child-care activities better, spend more time with children and be 'parents on demand'. But it is not only nonstandard schedules, but also the country-specific contextual aspects that seem to play a significant role. Family life and raising children in The Netherlands is still highly regulated and based on a male-breadwinner model (man working, woman staying home or working reduced hours) (van Gils & Kraaykamp, 2008) and the acceptability of reduced part-time hours. Relatively expensive and limited child-care and the school hours of younger children also implicitly assume that one parent needs to be home or work reduced hours. But it is also undoubtedly linked to cultural norms that form a less positive view of institutional childcare and working mothers. In fact, a recent government motion that suggested to make childcare free to all individuals and promote women to work more hours was met with protest by mothers and feminist groups alike. Dutch feminism is strongly built upon the 'right to work part-time', with the right to work full-time often vilified.

On the other hand, in contrast to previous studies and in line with work such as Presser (1988), working nonstandard schedules in order to arrange child-care and family life appears to have less negative consequences for families in The Netherlands. Parents seem to manage to keep their caring and quality time with children or even increase it compared to those who

work standard schedules. One of the explanations for this divergent finding might once again be the Dutch institutional context. For instance, part-time work is not only acceptable, but also widely used. Nonstandard schedule work (especially the shifts that are physically and socially more demanding) is often carried out in reduced hours, which due to high employment protection and working time regulations results in the employee receiving comparable benefits and wages and does not undermine their labor market position. Thus, the many negative effects of extreme physical strain and a poorer labor market position that have been related to nonstandard schedules in the U.S. seem not to be the case in The Netherlands.

We also uncovered a strong gender effect. Working nonstandard schedules in combination with children appears to affect men and women, however, in a slightly different manner and magnitude. First, working nonstandard schedules reduces the time spent in joint family dinners, particularly for male weekend workers. The qualitative interviews, however, challenged the validity of the quantitative measure of family dinners as a measure of parent-child interaction by revealing that evening meals were often replaced by other meals or activities earlier in the day, suggesting that families actively develop strategies to overcome this symbolic scheduling 'problem'. Families are acutely aware of scheduling and develop family calendars to make family appointments. For fathers, working nonstandard shifts significantly increased the time spent in activities with children, again found previously in studies such as Presser (1988). However, for women, working nonstandard schedules does not seem to increase women's time spent with children, nor does it reduce it.

There are clearer trends and gender differences when it comes to the division of daily child-care activities such as taking kids to school, staying at home when children are sick, or getting out of bed at night. Especially for fathers, their involvement in nonstandard schedules increases their share in child-care activities, whereas in some cases it significantly reduces the mother's share of daily child-rearing tasks. This finding again supports previous findings, such as Nock and Kingston (1988). Women tend to work more often around the schedules of the others, often in order to maintain their time spent with children. The qualitative interviews revealed that couples also jointly negotiate schedules, often adapting men's schedules as

well. An interesting finding is that women's child-care tasks are reduced when their partners work nonstandard times. This suggests that men in nonstandard schedules might be actively working in nonstandard schedules to engage in more time with and care of children, also suggested by the qualitative interviews. Thus, if we assume that working nonstandard schedules is a conscious choice, it indeed makes a difference when it comes to parent-child interaction. We also found that it is often fathers who work reduced hours particularly in combination with nonstandard schedules, which allows them to participate more in family life, which may be more unique to the Dutch context. Even though a male breadwinner or one-and-a-half earner family model are the dominant family structures, we can see that it is also men who modify their work schedules according to family needs.

Although this study provided more insight into parent-child interaction, examined a different context of The Netherlands and used multiple data sources and mixed-methods, there is still considerable room for improvement in future research. This data and empirical approach remains cross-sectional, missing the dynamic or 'life-course' transitions in and out of nonstandard schedules in relation to children. The qualitative interviews show evidence that entering or leaving nonstandard schedules is highly causally related to having and raising children, yet little is known about how stable these schedules are and whether it is a temporary life stage or a permanent work-family arrangement. Another fruitful area would be to link the study of parent-child interaction and nonstandard schedules to short- and long-term child and parental outcomes, such as the case in the work of Han, Miller and Waldfogel (2010). Finally, although the use of surveys and interviews provides a window into the effects of nonstandard schedules on parent-child interaction, the use of couple-level and ideally also time-use data from children as well that can establish father- and mother-child interaction time and joint parent-child time, such as in the recent work of Lesnard (2008) and Wight, Raley & Bianchi (2008), would be a promising further step.

3.7 Appendix

Table A3.1 Descriptive statistics of the qualitative individual-level sample

Category	N	%
Sex		
<i>Male</i>	14	51.9
<i>Female</i>	13	48.2
Partnership status		
<i>Married</i>	24	88.9
<i>Unmarried cohabiting</i>	2	7.4
<i>Divorced and not in a relationship</i>	1	3.7
Average age	29	
Age of children		
<i>1-3 children under 4</i>	11	4.07
<i>1-4 children >4 and <12</i>	12	44.4
<i>1-2 children older than 12</i>	5	18.5
Within-couple work times* (% based on N=17 couples, + 1 divorcee)		
<i>Male rotating shifts/hours vary; female homemaker</i>	5	27.8
<i>Male rotating shifts/hours vary; female rotating shifts/hours vary</i>	4	22.2
<i>Female fixed night shift; Male standard hours</i>	4	22.2
<i>Male fixed night shift; female homemaker</i>	2	11.1
<i>Female fixed night shift; male rotating shifts/hours vary</i>	1	5.6
<i>Female rotating shifts/hours vary; male standard (reduced) hours</i>	1	5.6
<i>Female rotating shifts/hours vary – divorced</i>	1	5.6
Occupation (of 19 NSS workers only**)		
<i>Medical and health related occupations</i>	3	15.8
<i>Manufacturing/manual labor occupations</i>	6	31.6
<i>Restaurant/hotel-related</i>	5	26.3
<i>Professional, administrative</i>	2	10.5
<i>Police</i>	3	15.8

N=27 individual-level interviews

N=17 couples, + 1 divorcee of which N=14 where individual-level interviews are available for both partners of a couple and of those couples,

N=7 couple-level interaction interviews

Note: *Within-couple schedules represent the total number of 17 couples with children, where at least one partner participated in the interviews. It was only possible to interview both partners of 14 out of the 17 couples, but all working schedule and basic information of all partners that were also not interviewed in the qualitative study is available. One respondent was also divorced by the time of the interview and in several cases the partner refused or was unable to be interviewed. Percentages are calculated with the denominator based on 18 household units (i.e., 17 couples plus the 1 divorcee).

**In four couples, both partners work NSS in the same occupational category (2 couples with both in manufacturing, 1 couple with both in a restaurant and 1 couple where both work for the police), for a total of 19 NSS workers.

Table A3.2 Couples' work time combinations among various family types in The Netherlands: combinations of number of weekly working hours, and types of working schedules, % (N)

	All couples	With no children ¹	With youngest child 0-3 years ²	With youngest child 4-12 years ²	With youngest child 13+ years ²
Schedule combinations					
<i>Male NW; Female NS shift</i>	1.1 (31)	1.6 (17)	0.2 (1)	0.7 (5)	1.7 (8)
<i>Male NW; Female NS day</i>	1.1 (31)	2.0 (22)	0.6 (3)	0.3 (2)	0.9 (4)
<i>Male NW; Female S</i>	4.6 (130)	7.6 (82)	2.0 (11)	1.8 (13)	4.9 (23)
<i>Male NS shift; Female NW</i>	2.1 (58)	1.2 (13)	2.6 (14)	2.9 (21)	2.1 (10)
<i>Male NS shift; Female NS shift</i>	0.6 (18)	0.4 (4)	0.6 (3)	1.2 (9)	0.4 (2)
<i>Male NS shift; Female NS day</i>	0.5 (13)	0.4 (4)	0.9 (5)	0.3 (2)	0.4 (2)
<i>Male NS shift; Female S</i>	2.6 (73)	2.5 (27)	2.6 (14)	3.0 (22)	2.1 (10)
<i>Male NS day; Female NW</i>	6.2 (176)	5.3 (58)	5.6 (30)	7.7 (56)	6.9 (32)
<i>Male NS day; Female NS shift</i>	1.1 (32)	0.6 (6)	2.0 (11)	1.5 (11)	0.9 (4)
<i>Male NS day; Female NS day</i>	3.0 (85)	4.0 (43)	1.7 (9)	2.9 (21)	2.6 (14)
<i>Male NS day; Female S</i>	8.2 (230)	8.1 (88)	8.0 (43)	7.4 (54)	9.7 (45)
<i>Male S; Female NW</i>	23.3 (658)	19.1 (208)	21.6 (116)	27.9 (203)	28.1 (131)
<i>Male S; Female NS shift</i>	4.2 (118)	2.9 (32)	6.7 (36)	4.0 (29)	4.5 (21)
<i>Male S; Female NS day</i>	5.5 (156)	6.3 (68)	5.6 (30)	5.2 (38)	4.3 (20)
<i>Male S; Female S</i>	35.9(1,011)	38.1 (415)	39.4 (212)	33.2 (242)	30.5 (142)
Working hours combinations					
<i>Male NW; Female PT</i>	4.4 (125)	7.8 (85)	1.1 (6)	1.6 (12)	4.7 (22)
<i>Male NW; Female FT</i>	2.4 (67)	3.4 (37)	1.7 (9)	1.1 (8)	2.8 (13)
<i>Male PT; Female NW</i>	3.8 (108)	4.7 (51)	1.9 (10)	2.7 (20)	5.8 (27)
<i>Male PT; Female PT</i>	6.0 (169)	6.1 (66)	7.6 (41)	6.7 (49)	2.8 (13)
<i>Male PT; Female FT</i>	2.5 (71)	4.0 (43)	1.3 (7)	2.2 (16)	1.1 (5)
<i>Male FT; Female NW</i>	27.8 (784)	21.0 (228)	27.9 (150)	35.7 (260)	31.3 (146)
<i>Male FT; Female PT</i>	37.4 (1,055)	23.9 (260)	51.9 (279)	44.1 (321)	41.8 (195)
<i>Male FT; Female FT</i>	15.6 (441)	29.2 (318)	6.7 (36)	5.8 (42)	9.7 (45)
Total % (N)	100.0 (2,820)	100.0 (1,088)	100.0 (538)	100.0 (728)	100.0 (466)

Source: NKPS 2002-4 ; Authors' calculations

Note: Sample: couples, where at least one of partners is working. No children¹ - no children and no children living at home. Age² - refers only to children living home;

Abbreviations: NW - not working or working less than 12 hours a week; PT - part-time work (12 -35 hours a week); FT - full-time (more than 35 hours a week); NS shift - nonstandard shifts (fixed evening, night, hours vary); NS day - nonstandard days (working in Saturdays/Sundays, day hours only); S - standard schedule (fixed day schedule, in weekdays only)

Table A3.3 Couple's work schedule combinations in The Netherlands: nonstandard schedules and working time, % (N)

		Female							Total male
		NW	NS shift PT	NS shift FT	NS day PT	NS day FT	S PT	S FT	
Male	NW	0.0 (0)	0.8 (23)	0.3 (8)	0.7 (19)	0.4 (12)	2.9 (83)	1.7 (47)	6.8 (192)
	NS shift PT	0.4 (11)	0.1 (4)	0.1 (2)	0.0 (1)	0.0 (1)	0.4 (12)	0.2 (6)	1.3 (37)
	NS shift FT	1.7 (47)	0.3 (9)	0.1 (3)	0.2 (6)	0.2 (5)	1.3 (36)	0.7 (19)	4.4 (125)
	NS day PT	0.2 (7)	0.1 (3)	0.0 (0)	0.1 (3)	0.1 (4)	0.5 (13)	0.1 (3)	1.2 (33)
	NS day FT	6.0 (169)	0.9 (25)	0.1 (4)	1.2 (35)	1.5 (43)	5.4 (152)	2.2 (62)	17.4 (290)
	S PT	3.2 (90)	0.5 (13)	0.1 (3)	0.4 (12)	0.4 (11)	3.8 (108)	1.5 (41)	9.9 (278)
	S FT	20.1 (568)	3.0 (85)	0.6 (17)	2.7 (76)	2.0 (57)	22.4 (631)	8.2 (231)	59.0 (1,665)
	Total female	31.6 (892)	5.7 (162)	1.3 (37)	5.4 (152)	4.7 (133)	36.7 (135)	14.5 (409)	100.0 (2,820)

Source: NKPS 2002-4; Authors' calculations.

Note: Sample: couples, where at least one of partners is working. Total N = 2,820 couples.

Abbreviations: NW – not working or working less than 12 hours a week; PT – part-time work (12 -35 hours a week); FT – full-time (more than 35 hours a week); NS shift – nonstandard shifts (fixed evening, night, hours vary); NS day – nonstandard days (working in Saturdays/Sundays, day hours only); S – standard schedule (fixed day schedule, in weekdays only)

