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On 'arriving on time', but what is 'on time'?

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Abstract

The time-geographical concept of coupling constraints, which define when, where and for how long individuals have to join other individuals and material objects, can be useful to 'time squeeze' studies. Geographers have typically operationalised the 'when' dimension of coupling constrains through arrival times at locations in physical space or the starting time of specific activities. This paper questions this approach and posits that it may be more productive to identify time-spans of acceptable or appropriate arrival times. However, these time-spans should not be expressed solely with reference to clock time. This is because boundaries on what is acceptable or appropriate depend not only on clock time but also on the times of the body and especially the time inherent to the dynamics in the juxtapositions and presence/absence of human beings and inanimate objects within a bounded physical space. Interview excerpts are presented to reveal how clock time interacts with contextual times in the modes in which parents in two-worker families perceive and cope with coupling constraints during workdays.

1. Introduction

It is commonly held that increasing numbers of individuals and households experience a shortage of time and have symptoms of 'time squeeze' like role overload or anxiety over time. Such problems are therefore attracting increasing attention in the social sciences (Southerton and Tomlison, 2005; Perrons et al., 2005). Given that a non-trivial share of such problems is due to the spatial arrangement of housing, workplaces and other services and the transport required to access these, geographers could make an important contribution to this developing literature (Laurier, 2004; Jarvis, 2005). In so doing, they may draw on time-geography, which offers a useful framework for understanding how and why individuals experience a shortage of

time and difficulty managing the multiple claims on their time.[1] Hägerstrand (1970) stressed that individuals are subject to coupling constraints, whereby they have to be present at certain physical locations at specified moments for a given duration. Some 30 years ago, he already wrote that "in the society we have, there is much headache related to time-use. One can safely assume that much of the trouble is associated with coupling constraints" (Hägerstrand, 1977, p. 64).

In many empirical time-geographical studies, coupling constraints have been operationalised in a rather pragmatic fashion. Coupling constraints are assumed to manifest themselves in the clock times of arrivals at specified activity locations – typically a person's home and workplace(s) – or the starting times of activities like working, household obligations or the chauffeuring of children or other persons

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[1] This is also evidenced in the work of many feminist geographers, who have drawn in one way or another on time-geography to show how women juggle paid work with domestic responsibilities (for reviews, see Rose, 1993; Kwan, 2000).

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(Kim and Kwan, 2003; Schwanen and Dijst, 2003).[2] These clock times are normally obtained via time-use or activity/travel diaries in which individuals log their activities.

Whilst this way of operationalising coupling constraints is convenient and useful in many ways, it also has various drawbacks. It implies, for instance, strong assumptions about punctuality and synchronisation. In addition to the issue whether coupling constraints are adequately measured, there is also the more fundamental difficulty that time is equated to Newtonian clock time. The significance of other temporalities to the modes in which individuals synchronise their actions with their environment may therefore remain underexposed. Expressing coupling constraints solely in terms of clock time only provides a rudimentary understanding of how individuals perceive and deal with such constraints in their everyday life.

In the light of these reflections, this paper tries to provide a thicker description of people's coping with coupling constraints and addresses two questions: how should the time(s) at which humans have to couple themselves to other humans, artefacts and physical locations be determined? And what is the role of clock time in relation to other times in such couplings and the synchronisation of social life? These matters are taken up in two ways. First an analytical framework is proposed that draws eclectically on various strands of literature, including time-geography, studies of social time, and social studies of science (May and Thrift, 2001; Adam, 2004; Law, 2004). Elements of this framework are then illustrated in an empirical study of how parents in dual-worker families – many of whom face many coupling constraints and are seriously pressed for time (Brannen, 2005) – cope with coupling constraints. The data used for this study stem from a small-scale multi-method study among two-earner families in the Utrecht region, the Netherlands.

2. Coupling constraints and timing

According to time-geography, human beings have to attune their daily and life paths with those of other humans and inanimate material objects, because they are neither biologically nor mentally self-sufficient and autonomous (Hägerstrand, 1970; Van Paassen, 1976). Coupling constraints defining where, when and for what duration individuals have to join other humans, materials and/or artefacts are (re)created in and shape this spatial and temporal co-ordination of the paths of human bodies, artefacts and other entities (Pred, 1981). This spatial and temporal co-ordination is also known as *synchorisation* and *synchronisation*

(choros = place; chronos = time), respectively (e.g., Hägerstrand, 1973). Especially for the bundling of human beings in space and time, "the clock and the calendar are the supreme anti-disorder devices" (Hägerstrand, 1970, p. 14). It is therefore hardly surprising that the 'when' aspect of coupling constraints is usually operationalised through the identification of specific clock times.

Yet, a focus purely on realised behaviour in the form of actual arrival times at specified types of location or start times for certain activities, which is characteristic for many time-geographical studies, implies that no account is taken of arrivals earlier or later than some preferred, intended, or prearranged (clock) time. Therefore, such an approach entails an implicit assumption of full punctuality; persons arrive exactly on time.

Outside time-geography, more advanced methods have been developed to measure the 'when' dimension of coupling constraints and synchronisation that relax the punctuality assumption. Work by transport economists, for instance, has long since shown that individuals tend to incorporate *safety margins*, periods of reserve time immediately prior to the required presence at a given spatial location, in their activity schedules to cope with uncertain travel times (see Noland and Polak, 2002, for a concise summary of work in this field). Other transport analysts seeking to make such constraints measurable avoid assumptions about punctuality altogether, instead attempting to determine the earliest possible departure time and latest possible arrival time at a given activity location through the application of the statistical technique of stochastic frontier modelling (Yamamoto et al., 2004, for instance).

While the studies discussed so far all concentrate on the identification of a single preferred, prearranged or possible clock time, other transport researchers have provided an even more useful conceptualisation of the 'when' aspect of coupling constraints. They assume that travellers hold beliefs about ranges of acceptable arrival times, which are sometimes called *indifference bands* (Hall, 1983; Mahmassani, 1990; Senbil and Kitamura, 2004). Although this approach seems more realistic for, and better applicable to, many everyday situations, there nevertheless remain some unsatisfactory aspects. It is implicitly assumed that these indifference bands are delimited by identifiable (clock) times that individuals can articulate discursively. Why a given clock time can be considered a boundary does not become very clear, however. In addition, notions such as the safety margin and indifference band treat time in isolation from space, privileging the former over the latter. Finally, the term indifference band hints at a conceptualisation of time as a singular and linear dimension. Indeed, all studies mentioned so far equate 'time' with 'clock time' and show little appreciation of the multiplicity of the idea of time.

With this last remark I have touched upon a second, more fundamental issue. In addition to the question how coupling constraints should be related to clock time, there is also the matter whether clock time is the only time to be

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[2] One way of identifying the activities or activity types whose starting times are used as manifestations of coupling constraints has been proposed by Cullen and Godson (1975), see also (Kwan, 2000). For each activity they have conducted, respondents are asked to rate the extent to which this activity could have been conducted at another time or another location and how easy it would be to change the time or location of the activity.

taken into consideration when studying the 'when' aspect of coupling constraints. The answer, I would argue, might be negative.

The conception of time represented by the clock is linear, neutral and objectively quantifiable in hierarchically ordered, homogeneous units like days, hours, and minutes. Its homogeneity and invariability make it insensitive to the physical world and external influences (Adam, 2004) and therefore extremely useful for the coordination of interaction. Though it is nowadays far more important than in pre-modern society, clock time has not fully replaced or captured the temporalities of the body, the physical environment and the cosmos (Parkes and Thrift, 1980; Hägerstrand, 1998; Adam, 1990, 2004). Numerous sociological and biological studies have suggested that these temporalities have a profound impact on human behaviour in general. From this it may be inferred that they also affect the modes in which individuals synchronise their activities with other humans, material artefacts and their physical environment. Thus, when coupling constraints are operationalised solely in terms of clock time, modes of synchronisation that relate more directly to the times of the body and the spatial positioning of material entities than to clock time may remain unarticulated. Feminist social scientists have suggested that these potentially unarticulated modes of synchronisation may be especially relevant to women and/or those with more feminine identities, such as caregivers (Davies, 1989, 2001; Odih, 1999).

One implication of the above arguments is that studies of synchronisation processes need to provide thicker descriptions of time than can be found in time-use and activity/travel diaries. How, though, should the 'when' aspect of coupling constraints be operationalised? Three points of departure for an alternative approach are proposed here: (i) individuals temporally co-ordinate their activities not only according to clock time but also with respect to other times; (ii) one of those times is related to the spatial juxtaposition of material entities; and (iii) coupling constraints and associated time-spaces of arrival are constituted and reproduced in actual practices.

The first of these notions implies that the multiplicity of time should be recognised and taken into consideration when studying coupling constraints and modes of synchronisation (Parkes and Thrift, 1980). There are many different times – the rhythms of the body and nature, for instance, as well as the clock times according to which much of social life is organised – which overlap but also interfere with one another; they are partially connected (cf. Haraway, 1991; Law, 2004). This means that the times of the body and nature are included in the clock times we encounter in everyday life yet cannot be reduced to the latter (Davies, 1989; Adam, 2004). In this interplay of times, clock time is an important instrument to influence and exert power over the coordination and coming together of human bodies and objects in space. Consider, for instance, an office building. The management and/or board of the organisation seated there may decide that all employees have to start working between 07:00 and 10:00. They thus timetable the office environment in an attempt to regulate the interaction within the office and thereby facilitate the efficient functioning of the organisation. Within this timeslot, bodily rhythms can be accommodated; employees who are at their best in the morning, for instance, may agree to start working at say around 07:30 and night owls at 09:45.

In addition to clock time and bodily rhythms, a relational sense of time may be relevant, in particular the time in the configuration of motion and materiality in what Hägerstrand (1995) calls the *landscape*: the dynamic fabric of all human bodies and minds, animals, artefacts and other entities that are present in a bounded physical space during a certain continuous time-span. This second notion reflects the underlying viewpoint that time and space are linked inextricably and should be considered together (Latour, 1997; May and Thrift, 2001). To underline the relevance of the dynamics in the juxtaposition of material entities within a landscape for synchronisation processes, the band of indifference concept discussed earlier is replaced here by the *time-space of arrival*, a time-span appropriate for arrival at a certain physical location. It is in embodied time-spaces of arrival that the 'when' and 'where' aspects of coupling constraints manifest themselves.

How the positioning of humans and objects conditions time-spaces of arrivals can best be illustrated through the example of the office building introduced before. It is important to appreciate that the timetabling of the office rhythms with the help of clock time by the management team does not take place in a physical vacuum. This mode of ordering involves associations of materially heterogeneous entities working together (Latour, 1997): doorkeepers, secretaries, the manager or boss her/himself, unlocked doors, PC login systems, etc. The dynamics in their spatial juxtapositions (organised on the basis of clock time) are likely to affect employees' notions of arriving on time, too early or too late.

The relevance of spatial positions may nonetheless stretch beyond the employer–employee relations. The corporeal presence/absence of individuals other than the employer (and the material objects associated with him/her) may also affect time-spaces of arrival. If all her colleagues are present around 08:30 already and busy with PCs, phones or written texts, this moment may become a hallmark in, or even a boundary on, an employee's time-space of arrival in addition to the 10:00 clock time: arriving after (almost) all colleagues have come in may be considered arriving (too) late. In a study of driving behaviour, Eric Laurier argued that travel speed should also be considered as being relational (2004, p. 271): "drivers, in using a motorway for cruising along its lanes have a speed that is theirs, and at other times use 'slow' or 'fast' as relational assessments of the way their car relates to other cars". In short, boundaries on time-spaces of arrival may be relational and tied to the presence/absence of other individuals or inanimate objects in a given physical space rather than to clock times.

In contrast to the band of indifference concept, boundaries on when arrival is acceptable or appropriate and what is 'too late' or 'too early' are at least to some extent fuzzy and fluid. While this is partly a consequence of the relationalism of time-spaces of arrival, it is also related to the third point of departure introduced above; it is posited that time-spaces of arrival are only partially the result of contemplation and application of cognitive plans, but are constituted in the concrete embodied actions of individuals (Thrift, 2004a; Wylie, 2005). Individuals may have limits in mind as to what is acceptable and what not, but may (re)act in ways seemingly contradictory to intentions because of the situation in which they find themselves (Hägerstrand, 1973). There is thus a constant oscillation between the ideas and beliefs about acceptable arrival times in a person's mind and the space-time context in which she is situated. In this interplay between mind, body and landscape, 'normal' intentions and cognitive beliefs about boundaries on time-spaces of arrival may not only be adjusted but also lose their significance being replaced by engaged and involved practice only (cf. Wylie, 2005). Interplays between practices and beliefs about appropriate arrival times also occur at longer time scales (Pred, 1981). Through repeated encounters with similar conditions, a learning process takes place through which persons obtain and develop knowledge about what is possible, tolerated or sanctioned, which mediates future practices. This knowledge comes in various formats, including cognitively-held beliefs as well as tacit and embodied forms (Thrift, 1999).

The foregrounding of practices also sheds light on persons' responses to others' attempts to order the coming together of the time-space paths of humans and objects. Let us return once more to the office example. The employees may adhere to the management's timetable and arrive somewhere between 07:00 and 10:00, thereby reproducing and consolidating existing power relations. Yet, they may also (seek to) cope with those timetables through *tactics* – shrewd ways of coping with the strategic zoning of space and time (De Certeau, 1984) – for instance by appealing to the fact that dropping off the children at the nursery demanded more time than planned when arriving after 10:00 at the office (see below). One would nevertheless expect that the 'official' timetables are more likely to impose clearer boundaries on individual time-spaces of arrival if they are implemented more forcefully and sanctioning is more severe. Thus, those employees whose presence is registered via time clocks and registered durations are commodified into actual wages and days off – probably more common among those with lower-skilled jobs – may be more careful to arrive at some set clock time than their counterparts in organisations lacking such systems.

While tactics are useful to our understanding of time-spaces of arrival, the concept is not without problems (Thrift, 2004b). This is because researchers sometimes dualistically conceive of action and practices as either tactic or strategic, and De Certeau's somewhat romantic equation of tactics to evasive behaviour by the weak suggests dualisms

of "small and large, practice and system, and mobility and grid which [are] surely suspect" (Thrift, 2004b, p. 44). The concept is employed here to highlight that travellers are not obedient and passive actors that are being coupled and decoupled but instead creatively exploit situations and opportunities.

In summary, the discussion of the literature has suggested that linking coupling constraints to a single clock time may not adequately capture the nature of synchronisation processes. It is more appropriate to identify time-spans of acceptable arrival times at certain physical locations. Identification of boundaries on these time-spans in terms of clock time is difficult, however. This is because the contextual times of the body and the positioning of material entities within a landscape are important to synchronisation processes but may not always map neatly onto clock times. The identification of unambiguous boundaries is also difficult because time-spaces of arrival are firmly rooted in embodied practices.

Through a foregrounding of such practices, the empirical study presented hereafter will explore how different forms of time interact in processes of synchronisation. Attention is thereby specifically focused on the time embedded in the dynamics of the spatial juxtaposition of bodies and other forms of materiality as parts of physical space and on the connections of this relational time to other times in three concrete situations: the requirements to pick up the child(ren) from elementary school in the afternoon respectively from the nursery in the early evening, and the demand to arrive at one's regular workplace in the morning. These situations are chosen because the literature and the interviews used for this paper suggests that coupling constraints associated with chauffeuring and work activities tend to have a very strong impact on individuals' time-space paths (Kim and Kwan, 2003; Schwanen and Dijst, 2003).

3. Empirical setting

The preceding discussion has highlighted the contextual, fluid and somewhat elusive nature of time-spaces of arrival. This poses obvious challenges for empirical investigation. Researchers won't be able to re-present time-spaces of arrival; they can only obtain a (very) partial understanding of which moments are appropriate for arrival through empirical research. To capture some of the characteristics of time-spaces of arrival, a multi-method approach has been adopted here. Respondents were asked to keep an activity diary on a pre-specified day and were interviewed the following day about the situations they had encountered during the day they logged their activities. If one seeks to obtain knowledge about time-spaces of arrival, drawing on persons' narratives constructed in interviews has some limitations, for instance because feelings and thoughts-in-action are difficult to put into words. An additional complicating factor is that narrators do not simply relay descriptive information about events but judge and monitor their story in terms of their perceptions of the interviewer's and their own

expectations and goals (Wiles et al., 2005). This was especially true for discussions of times appropriate for picking up children from the day-care facility or elementary school, which were coloured substantially by notions and expectations about parenting and being a good mother or father.

The data were collected in the context of a larger project on how time-pressured households cope with mundane contingencies in everyday life. In the period September 2004–February 2005, 40 adults in two-earner families residing in the Utrecht region, the Netherlands filled out a one-day activity diary and were interviewed. Only one parent per household was asked to take part. While it is recognised that participation of both parents would have yielded important additional insights into between-partner dynamics, this would have placed too much burden on the respondents and reduced the willingness to participate. The whole study concentrated specifically on days that both parents work, for it is on these days that time competition is fiercest and conflicts between work and caring tasks are most likely to occur. This implies, for instance, that all results presented hereafter relate to days when both of the parents were engaged in paid work.

All interviews were conducted by the author. Of the 40 interviews, the great majority (34) took place in respondents' homes, mostly in the evening after the children had been put to bed; the remainder were held at the participants' workplaces. The interviews had a semi-structured format: although there was a list of possible topics to be covered, topics were selected and questions formulated on the basis of the information written down by respondents in the activity diaries.

Respondents were selected on the grounds of several criteria. They must live together with a partner and at least one child younger than eight. This limit was imposed because young children affect parents' – and especially mothers' – activity patterns to a strong degree (Tivers, 1985). Both the respondent and his/her partner should also spend at least one day per week on formal employment (or education). In addition, given that significant differences exist between men and women in terms of household responsibilities and time-space constraints (Hanson and Pratt, 1995; Kwan, 2000), deliberate attempts were undertaken to include both men and women among the respondents. Care was also taken to incorporate respondents with differing levels of autonomy over their own working hours (which also meant people in different occupations and economic sectors), because it is believed that those with more flexibility in working times and spaces may perceive less problems in combining work and domestic responsibilities (but see Brannen, 2005). Finally, respondents were recruited from a variety of neighbourhoods. These differ in terms of local opportunities for activity participation, distance to the Utrecht city centre and accessibility to the highway and railroad systems.

Table 1 shows that participants are reasonably well distributed across the distinguished categories, although the number of participating men is rather low. This seems to reflect the framing of the study, which was broadly described as conflicts in the juggling of household and work obligations. During the fieldwork, it became clear that this topic appealed more to women than to men, which may reflect a greater awareness of and/or more experience with

Table 1
Basic characteristics of respondents

		Frequency	Percentage (%)
Gender	Female	30	75
	Male	10	25
Number of children	1 child	8	20
	2 children	28	70
	3 children	4	10
Age of the youngest child	<1 year	9	22.5
	1 to 2 years	7	17.5
	2 to 3 years	5	12.5
	3 to 4 years	8	20.0
	4 to 5 years	3	7.5
	5 to 6 years	5	12.5
	6 to 7 years	3	7.5
Work time autonomy	No autonomy	9	22.5
	Times determined in consultation with executive staff	15	37.5
	Certain fixed hours per day	5	12.5
	Full autonomy	11	27.5
Residential location	Utrecht inner area	4	10
	Utrecht east	6	15
	Utrecht south	10	25
	Utrecht west	6	15
	Leidsche Rijn[a]	8	20
	Suburbs surrounding Utrecht	6	15

[a] A relatively dense, large-scale greenfield development currently under construction and directly adjacent to Utrecht's built-up area; the development is the result of national government's attempts to limit urban sprawl and a further growth of car use.

such conflicts among working mothers (cf. Dermott, 2005). In general, interviewees held secure and highly skilled jobs and were highly educated: almost half had a university degree and only seven (17.5%) could be classified as medium-level/lower educated. Clearly, the findings presented hereafter are not representative for dual-worker families in general. They are instead intended to draw attention to events and situations that tend to have remained unconsidered in studies of synchronisation processes and to stimulate further thinking about this topic.

Furthermore, the gender division of labour is rather traditional in the Netherlands (Knijn, 2004), which means that the findings below may not necessarily be generalisable to other countries. Dutch dual-earner families are essentially one-and-a-half-worker families: less than ten percent of Dutch families with young children ($\leqslant$11 years old) combine two full-time jobs (>34 h per week), and almost half combine a full-time job with a (female) job of 12–34 h per week (Van der Valk, 2005). Associated with this pattern of labour force participation is a general moral climate emphasising mothers' role as primary carers for children (Knijn, 2004).

Finally, some brief remarks about the presentation of the results are in order. Throughout Sections 4–6, findings are put forward mainly through detailed renderings of specific though anonymised narratives. These cases have been selected because they aptly illustrate relevant points and/or represent common threads that run through various interviews. Because the interviews were conducted in Dutch, the excerpts integrated in the text are translations from the original transcripts. Efforts have been made to let the translated texts represent the interviewers' words as closely as possible. The typography of the excerpts represents the interviewees' rhythms of speech: the start of a new line implies a pause or a break, an indented line a continuation of the previous one.

4. The school in the afternoon: a fixed boundary?

Schools are strongly timed organisations, or networks of material entities, in which pupils and teachers are "choreographed to a symphony of buzzers and bells, timetables, schedules, and deadlines" (Adam, 1990, p. 105; see also Urry, 2000). One aspect of this timing is that, in the Netherlands, elementary schools are mostly out at 15:00 on Monday, Tuesday, Thursday and Friday, although 15:15 or 15:30 is also possible. On Wednesday afternoons, elementary school are normally closed and children are free after 12:00–12:30.[3] If children do not participate in after-school

programmes, one of the parents has to pick up the child(ren) when school is out. The school rhythms therefore impose important coupling constraints on parents' time-space paths. As Susan explains:

But I say, that is <u>sharp</u>[4]
(…)
and at three o'clock on the dot they are standing outside, if it's raining or not, so you really have to be standing there then you can pick up [youngest child] at the day-care centre between four and six, but those school times
(…)
well, and of course the teacher stays outside waiting with three, four, two, one child if the mother or father isn't there yet or the sitter, but you certainly don't want to put the children through that
(…)
because those children come out of a classroom and out of a school door with a satchel and a drawing in their hand and the first thing they do is look to see, where is my that is a moment that you want to <u>be</u> there or something
really it is completely different when I pick them up at the sitter's by those friends of ours or [youngest child] at the nursery they are always <u>busy</u> playing at the computer they would rather <u>not</u> come along; oh, are you here already, that's what you hear but that is something <u>else</u> than when they come out of school and they see you standing right there

Susan; three children aged seven, five and three; lives and works in Utrecht

Susan's vignette is relevant in the context of the discussion in Section 2. It illustrates the strong impact of the time on her time-space path via her children and associated material objects. The excerpt also suggests that she perceives 15:00 sharp to be a clear boundary on her time-space of arrival. This clock time is significant because it relates specifically to her children who expect her to be present at the school playground when they come out of the school building. It could therefore be argued that 15:00 per se is not the boundary but rather the moment her children leave the school building and come out onto the playground; the challenge for her is to be at the playground *before* they arrive.

The spatiality in Susan's account is also of interest. The last part of the vignette suggests that, for her, pick-up situations where her children are already in a certain space or building and she comes to meet them differ from situations in which both she and her children are entering the bounded physical space of the playground. In the latter instance, her children have different expectations about

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[3] Of the 119 elementary schools in the municipality of Utrecht for which school times can be retrieved from the internet, some 55% finish at 15:00 on Monday, Tuesday and Thursday, 20% at 15:15, and almost 20% at 15:30. For Fridays these percentages are lower, because a minority of the schools are closed in the afternoon, either for all pupils or for the youngest (4–6 years) only. On Wednesdays 47% close at 12:15, 16% at 12:30 and 13% at 12:00 (Municipality of Utrecht, 2005).

[4] Words underlined were emphasised by the respondent during the interview.

what they will encounter when they arrive there, and this clearly conditions Susan's time-space of arrival. The relevance of what happens within a bounded physical space is further illustrated by Susan's additional explanation that the school playground becomes a place where children negotiate with one another about with whom and where to play. While she does not want her children to have to wait for her, her role as a broker in such inter-child negotiation processes is a second reason that she needs to be at the playground on time. She wants to guide and co-ordinate her children's negotiations and arrange locations, pick-up times, etc. with other parents and child-minders.

While clearly unique, several aspects of Susan's narrative can also be found in those of other mothers. A common element across the interviews is that the parents' prime concern is about arriving too late, which would mean that their children would have to wait for them at the school playground. Arriving too early is of little relevance for many parents. Almost all explained that they find it very difficult to leave their workplace 'on time'. Many intend to leave there early, so that they will have ample opportunity to arrive at the school playground before the children do. Realising those intentions is, however, difficult: many interviewees indicate that they frequently leave their workplace later than intended, mostly because they need or want to finish a task or a meeting. This, in turn, is often directly related to the fact that they (intend to) leave their workplace when the organisation they are part of is in full operation. Thus, working parents who have to fetch children from school in the afternoon – among whom mothers are clearly over-represented – often find their own times in conflict with the office rhythm and their colleagues' times. All this implies that the time-space of arrival for picking up the child(ren) from school has no well-articulated boundary on the 'early' side; the issue is to arrive no later than the children on the playground.

However, in the interviews it also became clear that time-spaces of arrival do not always have a well-defined, non-permeable boundary on the 'late' side. John, a father whose workplace is very close to his children's school, picks them up three times per week. He explained that he arrives at the school playground before his children's school is out nine out of ten times. Sometimes though,

> then I know that I will be later than three o'clock but I still take that leeway so in that sense I cannot guarantee, and it doesn't bother me, that I will be in the schoolyard before the children get there but I have to say that I am mostly there before they come out of school a few minutes don't matter to me but ten minutes, I think that's very long
>
> (…)
>
> yeah, well, what is the limit? h'm, five, I think that, um, yeah. I don't think that's such a problem either, no, I know pretty much how things go
>
> first of all, the children are always late
>
> that does differ from class to class, though

but certainly [oldest child] now has a class where the teacher goes on for a very long time (…)

[youngest child] is a little earlier but after three o'clock too so that I already know I have already gained those couple of minutes, you could say

John; two children aged eight and five; lives and works in Utrecht

The vignette underscores the earlier argument that it is the moment that the children arrive at the playground that is relevant rather than the clock time of 15:00 per se. Unlike Susan, however, John allows himself every now and then to arrive a little later at the playground than his children. He explained that they do not notice him arriving some five minutes later, because they are negotiating with other children (and perhaps their parents) about with whom and where to play. So where Susan wants to mitigate her children's dealings, he seizes this process as an extra opportunity to finish a work-related task (like a phone call with a client around the time he has to leave) or to have a brief moment of relaxation in between his work and his time with the children. Hence, his time-space of arrival sometimes extends beyond the moment his children come out of the school building. His wife, however, does not really appreciate this tactic (De Certeau, 1984), and thinks he should be at the playground before the children arrive. He defended his behaviour by pointing out two additional factors. Because his workplace is so close to the school and he travels there on his bike, he knows that little can go wrong during the trip to cause unforeseen delay en route. He can thus determine his arrival time, given his departure time, with a very high level of accuracy. The age of his children is also important, he clarified. His first-born is old enough (8 years) to stay at the playground and look after the other child (5 years) while waiting for John to arrive.

The vignette further reveals John's difficulty in articulating a boundary between 'on time' and 'too late' in terms of clock time. Ten minutes is considered too late and five is more or less okay; there seems to be a boundary but it is difficult to pinpoint in terms of clock time. The interview nonetheless made it clear that the corporeal presence/absence of parents, classmates and inanimate objects is relevant here. As these leave the playground and his children stay behind increasingly on their own, arriving at the playground becomes progressively 'too late'. There is a relational sense of when an arrival is acceptable, depending at least in part on the spatial juxtapositioning of bodies and objects. Overall the excerpt suggests that clock time and the contextual time inherent to the dynamics in the spatial juxtapositions of bodies and objects are connected but cannot be reduced to one another (cf. Davies, 1989; Law, 2004).

In short, while the interviews suggest that the school strongly paces parents' space-time paths, the clock time of 15:00 is not a fully impeccable boundary on their time-spaces of arrivals, at least for some parents in some situations. For Susan and John, it is not the clock time per se that

is most relevant but the moment one's children leave the building. Their narratives also show that the positioning and corporeal availability of humans and objects can condition parents' time-spaces of arrivals in several ways. While the excerpts presented here draw attention to the relevance of the playground to parents' time-spaces of arrival at their children's elementary schools, there are also schools in the Utrecht area where teachers keep the (youngest) children in the classroom until their parents have arrived. It is difficult to tell how many schools have adopted this procedure for collecting children, but their choice to do so primarily reflects concerns about the children's safety. Unfortunately, the interviews do not provide information about a relational sense of arriving late when children are to be collected in the classroom.

5. At the nursery in the evening: the multiplicity of time-spaces

For many interviewees another important bottleneck in their daily round of responsibilities is collecting their children from the nursery, which often closes around 18:00 in the Netherlands.[5] However, many centres require parents to pick up their children before the official closing time. This is also true for the two nurseries that accommodated most of the interviewees' children; although they officially close at 18:00, they demand that children are collected at 17:45. The final quarter of an hour is a buffer for parents running late and gives the staff the opportunity to tidy up the centre for the next day. The centres also have a clock time from which parents are allowed to collect their child; for the parents in this study 16:30 was the (officially) earliest permissible pick-up time. It should be noted that many day-care centres in the Netherlands provide both accommodation for infants and after-school care; all centres referred to in this study accommodate children aged 0–12.[6]

At first sight, the clock-based timetable of the day-care facility gives parents more freedom with respect to the timing of picking up the child than is the case for the elementary school. Susan's vignette in the previous section and other interviews also suggest this. Many parents nevertheless expressed anxiety about arriving on time at the nursery. Here too, leaving the workplace on time is regularly problematic for many parents, especially when they worked in offices where direct colleagues and other staff members tended to work till 18:00 or later. Further, anxiety tended to be greater among parents who had to commute longer distances, which makes them more liable to unforeseen events

en route, and among parents commuting by car. The latter are most susceptible to traffic congestion, which is normally quite heavy at the end of the afternoon in and around Utrecht and whose severity can vary substantially from day to day.

The majority of parents, and in particular those working at a relatively short distance from the childcare centre, pointed out that they have "never" arrived at the childcare centre after 18:00. For some, the idea of their children having been dropped outside a closed nursery building is a real worry, even though they have been assured by the centre's staff that one staff member would always wait until one of the parents, a neighbour, friend or relative comes to pick up the child. For many interviewees, therefore, the clock time of 17:45 acts as a major point of reference. Kate, for instance, explained that that clock time is "etched onto her retina". A few years ago she arrived around 18:00, which resulted in a quarrel with a staff member that seriously upset their personal relationship. Although they talked the matter out afterwards, Kate continues to be very sensitive about not arriving later than 17:45, anxious that her children will suffer from renewed conflicts about pick-up times and knowing that she will be dependent on the centre's services for years to come. Her sensitivity goes so far that, knowing her husband is more easygoing in terms of arriving there on time, she regularly phones him around 17:00–17:15 when it is his turn to pick up the children to check whether he is already on his way to the childcare centre and urge him to hurry and be there as soon as possible. Thus, experiences from the past can haunt a person for a long time and continue to affect a person's time-space of arrival.

Her time-space of arrival is nonetheless not only conditioned by social factors. There is a clear physical dimension to it, which is related to the positioning and presence of materiality (human bodies as well as inanimate material objects) within the walls of the day-care centre's building. Although she arrives before 17:45,

K: Somebody always has to be the last one to get picked up, sure I know that, but then if it's yours who is then on the floor all by himself putting a puzzle together, well

T: that is not nice [7]

K: that is not nice, that is not nice. I prefer to pick him up at the same time along with lots of other parents and um, of course I know how those children react, um, I only have to hear just once that [youngest child] too had ever said, where is my mum now, while the other children were being picked up then, um, of course that cuts right to your <u>soul</u>, you

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[5] In recent years, more and more nurseries have extended their evening opening times, often with 30 min or an hour, to make it easier for parents to combine working and collecting times. This did, however, not apply to the two nurseries from which the majority of respondents for this study were drawn.

[6] In the Netherlands children normally enter the secondary education system at the age of twelve, which implies that they go to another school building, usually at a greater distance from their home.

[7] These words suggest that the interviewer is guiding Kate's narrative in a certain direction, but the wider, non-textual interview dynamics played an important role here. To him, the sound of Kate's "Well" (and her body language) suggested that she did not like having this situation occur, and this he sought to verify. Her positive response (uttered twice) sounded clearly affirmative.

might say, oh well, what also plays a role is that I also feel that they don't have to be the last to be picked up

Kate; two children aged five and three; lives in Leidsche Rijn and works in a suburb

The excerpt clearly shows how concerns about good mothering tie in directly with the dynamics in the juxtapositions of bodies and inanimate objects and a relational sense of arriving on time. The interviewer's attempts to have Kate relate this relational sense of arriving on time to clock time were only to some extent successful: she could not give a more precise indication than between 17:30 and 17:45. It appears that, as the literature also made clear, these times overlap only partially and cannot be reduced to one another. The 'failure' to map the relational time on clock time was not limited to Kate's interview, but occurred in many interviews. It thus appears that this 'failure' is not a product of the specifics and dynamics of the interview with her (though in no way fully precluding that possibility).

Note, however, that the relational sense of arriving on time actually makes coupling constraints for Kate *more* binding and thereby reduce her (perception of) time availability. Although it cannot be pinned down to a single clock time, what goes on in the direct vicinity of her child(ren) may imply that arriving at say 17:35 rather than 17:45 can already be too late.

Several interviewees made it clear that they are less concerned about arriving before 17:45 and keep 18:00 in mind as a point of reference. Anna, for instance, focuses on 18:00 as the latest permissible arrival time, even though the childcare centre's staff does not appreciate this: "coming in at two to six is really, then you really get the feeling that it's not done". Leaving her office before 17:00 is difficult for her though, as it is still in full operation then. She also has to commute some 40 km by car and part of her trip is on one of the Netherlands' most congested highways (the A2), which makes her feel that she has to leave even earlier from her workplace. Despite this, her words also point at a relational conception of what it is to arrive too late. When she picks up her children before 18:00,

[her children] are almost always the last of their classes at first I felt that was just awful but I really don't feel that way anymore, six o'clock is six o'clock and now I have found a parent who sometimes gets there <u>just</u> a little later than me so then it's alright again (laughs)

Anna; two children aged two and one; lives in a suburban settlement and works in a medium-sized city near Utrecht

The vignette brings out the multiplicity of what 'arriving on time' means. Anna appears to be rationalising her actions by referring to clock time, according to which she is on time. However, her words also suggest that she is more

at ease when her children are not the last ones to be collected. Their local time-space context thus has a direct bearing on her time-space of arrival.

Her husband copes differently with the nursery's timetable. As Anna explained, he is always too late (arriving at 18:00 or later) but is not embarrassed by it: "then he has something like well I'm too late sorry". His tactics are being tolerated by the centre's staff, however, because he does not arrive *too* late and because few parents pick up their children late from that specific nursery, which means that the centre's head has not implemented sanctions so far.[8] Anna does feel embarrassed by her spouse's tactical behaviour and regularly checks up on him via the mobile phone to see whether he is already on his way to the centre when he is supposed to collect the children. In brief, a parent's time-space of arrival is sometimes at odds with the day-care centre's timetable as well as that of his/her partner.

Most parents nonetheless arrive at the day-care centre before 17:45. While there is an important 'social' dimension to this, there is also a physiological aspect in play here – the children's physical condition or biological time. Being on the move since the early morning and having been engaged in collective rhythms for the whole day that may not fully correspond to children's bodily rhythms, they become tired in the late afternoon. Robyn, a mother who also works at a child-care centre, puts it as follows:

at five o'clock it's over;
the lights go [out]. Well, actually it already starts at four thirty. As a parent, I think you should already take that into account because how do you feel after a day's work? Well, and children are, after all, they are on the go all day and have to totally keep to <u>our</u> rules <u>our</u> rhythm;
at four thirty that's finished

Robyn; 2 children aged six and four; lives in a suburb and works in another suburb

She therefore advises parents to pick up their child directly at 16:30 (from whence collecting children is allowed) when the opportunity presents itself. While interviewees tended to underscore the relevance of this biological time, many pointed out that some children are more susceptible to fatigue effects than others. For some interviewees, arriving on time according to biological time to some extent conflicted with a relational sense of arriving on time. Peter's vignette, like various other interviews, suggests that a parent can also arrive too early even though it is past 16:30, which often implies that s/he has to wait and participate in the child's activities.

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[8] Some nurseries have adopted a policy where three late arrivals result in the dissolution of a contract with parents, forcing the latter to find alternative accommodation for their child(ren). It is also possible that day-care centers impose monetary penalties in the case of late arrival. It is not clear how many nurseries in the Utrecht area have adopted measures such as these.

P: and especially for [oldest child] what happens is that if you come to pick him up while he is still at play, then he's not at all happy, so it's like he would rather that I… the children all around him are gradually being picked up and that he would then be taken away while [youngest child] has just about had it at five o'clock, like,

'what's keeping papa and mamma now', so you have to manoeuvre a little in between there

T: right, sure. So you can actually come too early too?

P: you <u>definitely</u> can come too early for [oldest child], oh yeah

Peter; two children aged five and three; lives in Utrecht and works in Amsterdam

The consequences of ignoring children's biological time usually manifest themselves later in that day or the next day: children starting to whine or cry at the least little thing, refusing to eat, disagreements among parents, etc. To keep things running smoothly at home, parents (intend to) commit themselves to picking up the child(ren) on time, that is considerably before 17:45 and sometimes even before 16:30 (although that is not always appreciated by the staff since it potentially disrupts collective routines). Again we see that parents' time-spaces of arrival may not match the nursery's timetable, but boundaries in terms of what is acceptable and what not are difficult to express in terms of clock times for many parents.

In summary, there are many time-spaces of arrival and these may, or may not, fit in nicely with the timetables set up by the day-care centre's management. Because they relate to bodily rhythms and/or the presence/absence of diverse forms of materiality in a physical space they are often difficult to express in conventional clock times.

6. The workplace in the morning: prioritising responsibilities

What emerges from the two preceding sections is a picture of working parents who reconcile various social and moral responsibilities when performing chauffeuring duties in the afternoon and evening. This results in embodied times-spaces of arrival with fluid boundaries in which clock-based environmental timetables, dynamics in the landscape, bodily rhythms, social relations and personal beliefs and intentions are continually folded into one another.[9] Such interactions and oscillations between individuals and their socio-material context also occur in other situations, including arrivals at the workplace. Because much of the literature about timing of trips and activities in transport studies and sociology focuses on working, I will

end the empirical part of the paper with a focus on time-keeping for commuting trips in the light of juggling of work and domestic responsibilities.

When studying arrivals at the workplace, it is important to consider the extent of control workers have over their own working times, which is related to occupation type, education level and gender in the Netherlands and elsewhere. Generally speaking, men, the higher educated and those with managerial functions and working in creative sectors such as the new media (perceive to) have more control over the temporal aspects of their work (Breedveld, 1998; Brannen, 2005; Jarvis and Pratt, 2006). One would thus expect those with less autonomy over work starting times to have clearer boundaries on their times-spaces of arrival and the interviews show that this is indeed the case. This is not to say that those boundaries for workers with rigid work starting times are totally bereft of ambiguity. They are allowed to arrive late, for instance in case of a sudden visit to a doctor or sickness of a child, though this should happen "not too regularly" (Jane; three children; school-teacher; no control over her working times). Wanda's narrative also exemplifies the semi-permeability of rigid coupling constraints. She works as a pharmacist's assistant and has to be at the pharmacy when it opens at 08:00. Her job thus gives her very little control over her working times. Before she had children, she always "was there at ten to eight". Yet, now that she has to bring the children to the day-care facility and her first-born finds parting from her quite difficult, she occasionally runs out of (clock) time and arrives after 08:00 (cf. Davies, 1989, 2001). As she explains:

W: yes, even five past eight makes me feel bad, but oh well sometimes it can't be helped that, um but other colleagues, I think they feel it's not, um

T: when do you think it would be a problem for them?

W: Well I think a quarter of an hour would already start to bother them but we aren't very busy yet at eight o'clock

Wanda; two children aged three and six months; lives in Leidsche Rijn and works in a suburb

Occasional arrivals later than the moment the pharmacy opens are possible, although there are boundaries on what her (female) colleagues tolerate. There is a sense of solidarity at the work floor: some of her colleagues also have children and know that morning routines with children sometimes take more time than on other days. This allows Wanda to get away with a slightly late arrival (albeit one ridden with guilt). Note that the corporeal presence of humans within the pharmacy also makes it easier to arrive a little late. There are few customers just after 08:00, certainly in relation to the number of staff present at that time. Sufficient staff are available to open the pharmacy and conduct important tasks like helping customers.

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[9] See Wylie (2005) for a discussion of embodied time-spaces in the radically different setting of a lonely walker in a landscape along England's south-west coast. In his account dynamics in the landscape play a larger role than here. Environmental timetables and social and moral factors, which add so much complexity to the working parents' time-spaces are, however, irrelevant to the individualised walker in Wylie's paper.

Wanda also explained that the pharmacy works with an "old-fashioned" time clock to register presence. Interestingly, the use of this clock reduced her feelings of guilt, because the difference between her official and actual starting time is deducted from her working time. Moreover, she can easily compensate her lateness with the extra time she normally works at the end of the day when a late customer needs to be served, cash accounts need to be made up, etc. Other interviewees described similar tactics (De Certeau, 1984) for dealing with employers' attempts to regulate and control working times via time clocks. It is partly through such tactics that the interviewed mothers and fathers were able to juggle work and domestic tasks.

Accounts such as Wanda's differ markedly from those by parents with more control over their work starting time. Time-spaces of the latter have more fluid and fuzzy boundaries but are still conditioned by several sets of constraints. Firstly, arranged meetings have a restrictive impact, although the extent of restriction depends very much on the meeting's character and with whom and where it takes place. If it is with direct colleagues in an informal setting, there is usually more room for improvisation and less weight is placed on strict punctuality than in say a formal business meeting with one's boss or persons never met before.

Secondly, interviewees with more flexibility in workplace-timekeeping are often responsible for delivering the child(ren) to the nursery and/or elementary school in the morning, especially if their partners face rigid constraints at the workplace. Karen has a time she is more or less expected to be at her workplace (09:00), but works in the personnel department of an organisation with individualised, project-based working times. She normally is not present by 09:00, however, since she first has to bring one child to the nursery and the other to an elementary school that starts at 8:45. Because she has to cycle some 20 minutes from there to the office, she usually arrives around 9:05, "which is fine". Sometimes though,

I am so late that I switch it around
that first I bring [oldest child] to school
well, then at nine o'clock, um, I'm
at the day-care centre and then I'm here by nine thirty, ten o'clock or so
but that I can deal with, you know, that, I think oh well, phooey
so for today that's just too bad, okay
once I have decided that it won't work out

Karen; two children aged four and two; lives and works in Utrecht

The vignette makes it clear that delivering the children and the time this takes are prioritised over arriving at her work at the normal time. Whilst regretting her lateness, Karen modifies her intentions and aspirations with respect

to arriving there rather easily, and this seems not be accompanied with much stress. Work-related time-keeping dropping into second position behind delivery of the children is not restricted to mothers. At least among the interviewees and their households, fathers take care of a considerable share of the morning chauffeuring tasks. Peter, a university professor with full autonomy over his working times explained that, for him too, quietly delivering the children at the childcare centre is his "first priority" despite his long train commute on a connection known for its rather frequent though erratic delays. Thus, moral concerns about parenting not only condition mothers' but also fathers' workplace-timekeeping.

Thirdly, apart from children, there may be other social actors that matter to the embodied space-times of arrival at the workplace for workers with rather flexible working times. The interviews suggest that employees may evaluate their own arrivals with respect to those by others. Here is Anna again, who 'officially' starts at 08:30:

with regard to the nursery, I am more punctual than with regard to my work because, um I also come in quite often at eight forty
(…)
in the mornings it doesn't bother me much, you know but well it's just that, oh, it's quite childish but I'm usually the first one to even come in when I get there at nine thirty-five or nine forty unless there is a colleague who is starting at eight thirty but that is then really the only one who knows, oh today [Anna] is a little later but hardly any attention is paid to that, there are also colleagues who come, who start at nine o'clock, who come in at half past nine

This vignette suggests first of all that punctuality is more important when delivering or fetching children than with starting work. This is partly a consequence of the lack of control at the workplace through direct observation by colleagues (who tend to arrive later than her) or via systems that permit surveillance in other time-spaces, such as a time clock. Relational timing is nonetheless important here, for Anna is more uncomfortable with her own arrival when a colleague sees her being later than her official time and because she justifies her own behaviour by relating to colleagues who also start later than their official starting time.

Clearly, the level of autonomy workers have with respect to their work starting times affects the ease they have with juggling work and caring responsibilities. Individualised, more flexible working hours in terms of clock time may, however, not always be a panacea for alleviating conflicts between responsibilities (see also Brannen, 2005). This is, as the above examples suggest, because social relations with children and colleagues also tie working parents to physically separated locations and impose (ambiguous) boundaries on their work-related time-spaces of arrival.

7. Conclusions and discussion

In this paper it has been argued that, while Häger-strand's concept of coupling constraints is useful for understanding situations of time squeeze, conventional empirical operationalisations of this concept are to some extent problematic. Two questions were therefore formulated: (i) how should the time(s) at which humans have to couple themselves to other humans, artefacts and physical locations be determined? (ii) what is the role of clock time in relation to other forms of times in coupling constraints and the synchronisation of activities?

With respect to the latter question, this paper has argued in favour of a functionalistic view on clock time. It is a very efficient instrument to coordinate the time-space paths of humans, artefacts and other objects because of the homogeneous and context-independent conception of time it enables. Exactly these properties imply however that the experience of time prompted by the body and events in one's physical environment remain at least to some extent unarticulated if time is equated to Newtonian clock time. As the empirical study has made clear, these latter times certainly bear on the way people synchronise their time-space paths with those of others and material objects. For the elementary school the moment the children enter the physical space of the playground tends to be the crucial instant in the synchronisation process, while the moment(s) other parents pick up their children as well as the children's biological clocks are important in the case of the nursery. Finally, the behaviour of colleagues can significantly affect employees' timing of their arrivals at the workplace.

These relational and bodily times are connected to clock time but cannot be reduced to it, which implies that researchers cannot fully grasp synchronisation processes by concentrating on clock time alone (see also Parkes and Thrift, 1980; Adam, 1990, 2004). Researchers seeking to understand how individuals cope with the 'when' aspect of coupling constraints should therefore attempt to take the multiplicity of time into account. They should direct attention to clock time, bodily times, the times inherent to the dynamic positions of material entities in a physical space and possibly other temporalities that have remained underexposed here, as well as to the interplay of all these times. One way to do so in a larger-scale, quantitative study adopting a time-use or activity/travel diary approach would be to incorporate additional questions for respondents about their arrival times at specific types of locations. The questions about the temporal flexibility of activities proposed by Cullen and Godson (1975); see footnote 2 would be a good starting point. They might be supplemented with questions about the relevance of the behaviour and attitudes of other persons (e.g., colleagues, other parents) and the dynamics in the physical conditions at those locations.

This study's recognition of the multiplicity of time and its detailed focus on actual practices may have yielded findings that are potentially relevant to the time-squeeze literature and the body of work about how individuals cope with space-time constraints. One insight that requires attention in future research is that coupling constraints at nurseries may be more binding for parents – and perhaps especially for mothers – than the clock-based timetables may suggest. A mother can therefore simultaneously arrive 'too late' in a relational sense but 'on time' according to the nursery's clock time. This suggests that that she may perceive her opportunities for combining work and domestic responsibilities to be more limited than a focus on the clock-based opening times of the childcare centre in relation to her working hours would suggest. Similarly, social and moral constraints centred on colleagues may tie employees to a larger extent to the workplace than flexible 'official' working start times expressed in clock times suggest.

The study has further provided indications that coupling constraints may not be as rigid as often thought and/or revealed in quantitative surveys. At least for the parents in this study, time-spaces of arrival are frequently imbued with fluidity: unambiguous, non-permeable boundaries between being on time, being early and being late are hard to find and may not exist at all for specific activities. Even for fetching children from elementary school, the boundary between 'on time' and 'too late' is sometimes not clear. Some interviewees created elbowroom through tactics, which suggests that they should not be seen as passive victims of space-time constraints but as active agents carving out their own room for manoeuvre (Kwan, 1999).

One should, however, be careful with drawing general conclusions from the case-study. It should be kept in mind that in the Netherlands it is very common for mothers in dual-worker families to hold part-time employment and be responsible for a relatively large share of domestic chores. Perhaps this is one of the reasons why a relational sense of arriving on time when collecting children seems to be more important for women than for men. Further research using data from other geographical contexts as well as from Dutch households with other educational attainment levels and, by implication level, other occupations and working time arrangements is therefore warranted. The analytical framework presented can also be extended. Especially the 'how long' aspect of coupling constraints has remained underexposed and merits more attention in a theoretical and empirical sense. These and other challenges will be taken up in future work.

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