Gender differences in children escorting practices among dual-earners families in the Paris Region

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GENDER DIFFERENCES IN ESCORTING CHILDREN AMONG DUAL-EARNER FAMILIES IN THE PARIS REGION

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ABSTRACT
The present article looks to pinpoint explanatory factors for the sharing of escorting of children in dual-earner families. It proposes a detailed analysis of inequalities and interactions in dual-earner families when it comes to escorting children by taking into account the characteristics of trips to and from school for children, the characteristics of the parentsô occupations, and the characteristics of the household. Compared with earlier research, the model considers more detailed data about the escortsô jobs, such as specific working hours, which provide a better understanding of the constraints on parents and insight into the choices made when both parents are in a position to escort their children. The findings depart somewhat from those of earlier work on the question because more specific data are considered. They show a marked gender inequality in escorting because mothers in dual-earner families do more than two-thirds of the escorting. But the factors explaining the sharing of escorting act almost symmetrically for both parents, with the effect of work starting and finishing times being preponderant. These models confirm that the inequality kicks in ahead of this: mothers in dual-earner households are more often than fathers in jobs with shorter working hours and which are more compatible with escorting.

Keywords: Escorting; Chauffeuring Trips; Dual-earner Families; Parenting; Household Interactions; Household Travel Survey

INTRODUCTION

Much research has been conducted in recent years into parentsô escorting of children especially between home and school. This phenomenon lies at the junction of three areas of research into transport and mobility. The first these areas relates to gender differences in mobility *(1)*. It reveals that escorting is shared unequally between mothers and fathers *(2)*. Even when both parents are earners, women do more of the chauffeuring *(3)* because they are considered to be the primary care-givers for the children *(4)*. The second, more recent and very active area of research relates to factors prompting active modes of transport for children traveling to school and back. The challenge is the fight against overweight and obesity *(5, 6)*. The effects of the built environment have been investigated and the findings show that local planning actions are decisive factors in childrenôs travel choice between active modes (walking, cycling) and chauffeuring. But escorting remains primarily a question of the age of the children and the availability of parents, and especially mothers *(7)*. The third area of research that has been developing in recent years concerns interactions among members of the same household and their effects upon demand for transport *(8)*. Unlike the previous research, interaction models point to a difference in factors prompting parents to take their children to school in the mornings or to bring them home in the afternoons *(9, 10)*. Apart from whether or not the parents work and their working hours, escorting may vary with the sharing of other activities between the parents *(11)*.

The present article is part of this third area of research and looks to pinpoint explanatory factors for the sharing of escorting of children in dual-earner families. It proposes a detailed analysis of inequalities and interactions in dual-earner families by taking into account the characteristics of trips to and from school for children, of the parentsô occupations, and of the household, much as in the previous models *(9, 10)*. Compared with earlier research, the model considers more detailed data about the escortsô jobs, such as specific working hours, which provide a better understanding of the constraints on parents and of the choices made when both parents are in a position to escort their children.

The findings depart somewhat from earlier works because more specific data are considered. They clearly show a marked gender inequality in escorting because mothers in dual-earner families do more than two-thirds of the escorting. But the factors explaining the sharing of escorting act almost symmetrically for both parents, with the effect of work starting and finishing times being preponderant. Mothers in dual-earner households are more often than fathers in jobs with shorting working hours and which are more compatible with escorting *(12)*. Conversely, ósplit-shiftô practices remain rare in dual-earner families in Ile-de-France, the dominant practice being for the same parent to accompany the children morning and evening.

PREVIOUS RESULTS

Dual earners but not dual carers, women are the primary care-givers and chaperones

Within couples, gender differences have been the subject of much research into the distribution and sharing of household activities, both domestic and parental. These activities are said to catalyze the continuation and re-production of considerable gender inequality *(13)*. And yet, the growing participation of women in the labour market is indicative of a decline in the supposedly dominant model of the male breadwinner, where the man is the earner and the woman the homemaker and carer for the children *(14, 15)*. This model would seem to have given way to a new more equal ideal of sharing: the dual-earner/dual-carer model in which both men and women participate equally in household activities. However, in point of fact, the dominant model in western countries is rather that of dual-earner but not dual carer because many inequalities remain. Apart from differences in earnings, careers or access to employment, the distribution of jobs related to the home remains a stumbling block. In France the division of both domestic and parental labour has changed little *(16)*. Even within dual-earner families, the woman is often forced to take on a second service *(17)* doing both her job and domestic chores. Women then find it increasingly difficult to reconcile work and private life *(18)*.

Although women do most of the escorting of children, men do contribute too. In the Netherlands, based on an ad hoc survey in Utrecht, men undertake 38.4% of school runs by dual-earner families *(3)*. In the United States, men are less involved in escorting children according to the National Household Travel Survey (NHTS) making 30.5% of school trips whether the mother is in work or not *(7)*. The

Atlanta household activityï travel survey reports a similar level of participation by men in taking children school (29.8%) and even lower participation in collecting them from school (23.3%) *(9)*. Analysis of the Household Travel Survey (EGT) for Ile-de-France set out below shows that men do 32% of the escorting.

The unequal contribution of parents to escorting children is not merely the reflection of occupational inequality (level of activity, job characteristics, etc.). While more women work part time and close to home, all else being equal, female household members do more escorting than males *(9)*. However, these findings are based on analyses that take account in part of the characteristics of employment and of the working day of the parents. Yet the sector of activity, type of employment, and precise number of hours worked are all factors that affect the likelihood of escorting the children *(3)*. Ignoring the interaction with child commuting, while women maintain a high level of escorting even when they have long working and commuting times, men seldom escort their children when the working and commuting time is above average. Short of a fair share-out of chores, fathers are more involved in escorting children when the mother works *(3)*. Men in dual-earner families are more likely to do some of the escorting *(10)*.

Interactions between partners in escorting practices

Although the characteristics of each of the parents are decisive, some research underscores the crucial role of interactions among household members over escorting the children. But the emphasis falls primarily on the crossed effects between parents and children *(7, 9 and 10)* and not between the parents themselves. It is difficult to take account of interactions between parents insofar as the research primarily models childrenôs travel to and from school and not escorting practices by either parent. In addition, two-parent and single-parent families are analyzed indiscriminately. At best, the research confirms the fact that women do more chaperoning than men, all else being equal.

A closer analysis of the interactions between parents has been proposed by considering dual-earner households and modeling the escorting practices of parents rather than childrenôs commutes *(3)*. The outcome is that women adapt their level of escorting to their partnersô time constraints, and the partners offset to some small degree the womanôs long working day by moderately increasing their participation in escorting. Moreover, partners may interact intensely but in various different ways *(11)*. They may share traveling by taking advantage of their complementarities *(19)*. For example, faced with very busy schedules, one partner may take care of the shopping while the other escorts the children. This specialization in domestic activities would seem then to explain why women predominantly escort. However, by comparing the activity schedules of men and women, some couples seem to have an escorting strategy. The father takes the children in the morning before going to work and the mother picks them up in the evening after work *(3)*. In this case, escorting is shared equally between the parents.

Characteristics of children and of the area determining escorting practices

Besides the characteristics of the parents and their interactions about escorting, factors related directly to the children are reported to influence the parents escorting practices. The motivations and the levels of escorting vary greatly with the age of the children. While children under the age of six are almost systematically accompanied to school, the proportion declines rapidly with increasing age *(20, 10)*. The number and age of siblings also affects the likelihood that parents will accompany them *(3)*. Older siblings can accompany younger ones and parents are less concerned about safety when children go to school in groups *(20, 21)*.

Insofar as children are essentially escorted by a motorised mode *(7)* for reasons of convenience and compatibility with the parentsô own commute *(21, 22)*, the built environment of the home and school is reported to influence the likelihood of parents escorting their children. Several studies have shown that the choice between active and motorized modes is related to the built environment *(6)*, especially for children *(23)*. For many researchers, the aim is to show that public policies can act against problems of overweight and obesity in children by encouraging them to use active modes of transport. Among the characteristics of the built environment, the main factors investigated include accessibility or proximity, mixed land use, density, aesthetics, sidewalks, street connectivity and safety. These factors are not to be considered in isolation but must be associated with other factors like the transport options available to parents and children, social/cultural norms, and socio-demographic characteristics.

They have some effect on the mode of transport of children and indirectly on the probability of them being accompanied. All told, these factors mean that the locations of the home and childrenôs school or parentsô work and their characteristics affect the escorting of children.

HYPOTHESIS AND RESEARCH DESIGN

With regard to the bibliographic framework and the factors highlighted, we shall examine the inequalities between parents of dual-earner households in escorting their children on the basis of data from the Household Travel Survey (HTS) of the Paris Region. The survey contains a fairly precise description of mobility for escorting and for commuting. It was conducted by face-to-face interviews captures information on all trips undertaken by household members aged six and over on a designated survey day as well as socio-demographic information *(24)*. In all, 10,478 households were surveyed between 2001 and 2002. Of those households, about 1,400 were dual-earner families with at least one child. We aim at analyzing escorting by parents of these households. Given the relatively moderate sample size, we capture here only dual-earner couples of different sexes.

Our first hypothesis is that escorting practices are shared unequally between men and women, all else being equal. For a working day of equal length, with the same starting and finishing times, it is more likely women will do the escorting. The second hypothesis is that interaction occurs between parents and that despite male/female inequality, the escorting practices of one partner depend on their own occupational constraints and those of their partner and on the partnerôs escorting practices. Thus the probability that the father will escort the children home in the afternoon will be greater if the mother works late and takes the children to school in the morning. The third hypothesis postulates a spatial dimension to escorting. For families living in the city centre, fathers escort their children more often than when families live on the outskirts, especially for the morning trips *(3)*.

To test the three hypotheses, we perform multivariate analysis based on HTS data for the Paris Region. The results set out here are based on multinomial logit models. The first two predict the likelihood of escorting in the morning, the afternoon or both, for men and for women. The next two look exclusively at households which escort their children and predict the likelihood of it being the father rather than the mother who do the escorting, one for the morning and one for the afternoon.

Child escorting in the HTS

The trips studied are the escorting of children by their parents. Parents must live as couples and have jobs. The Paris Region HTS indicates whether the person escorted is part of the household and if so whether it is a child of the couple. In this way, we can circumvent the restriction of the surveyð which does not enquire into the mobility of children under six years oldð by inferring it from the parentsô escorting mobility. This study therefore covers the escorting of all children and not just those aged over six, as in recent research on childrenôs travel. Moreover, all trips were taken into account and not just school runs. It is assumed here that interactions between parents over escorting are not confined to school and that escorting should be taken into account comprehensively so as to better analyze it.

Even so, school remains the main reason and probably the one that structures escorting. If taking the child involves a detour on the way to work, this will have a negative effect on the likelihood that parents will escort the child *(9)*. For this reason, it is necessary to identify more specifically trips relating to school so as to deduce its location, especially for children under six years old. The HTS from the Paris Region indicates the reasons for the trip made by the person escorted. Yet, only 70% of children under six were escorted to school. To offset this, the detour for parents for other children in the family was applied to children under six for which the detour could not be determined. For children over six who were not escorted to school, information about the location of the school was obtained from analyzing the mobility of the children themselves. The school location was included in the models notably by calculating a level of effort, that is, the detour in terms of time involved in escorting to or from school on the commute to and from work.

Characteristics of the partnersô working days to understand parentsô escorting practices

Information on the mother and fathersô work status, occupation, education, transport mode and distance to work is recorded in the HTS for the Paris Region: these characteristics are known for all of the dual-earner households surveyed. It is also possible to infer the number of hours worked by each parent from the departure and arrival times for commutes, which is a variable used in many models

about escorting or childrenôs school journeys. But we also used the starting and finishing times at work to determine whether they were compatible with their childrenôs school times and to check whether parents are in a position to take their children to and from school. In the French school system, which is very largely state-run, school times up to the age of 10 are fixed, starting at about 8.30 am (depending on the local area and schools) and ending at around 4.30 pm. Moreover, in most schools, there are after-school arrangements for children to remain up to 6.00 pm. This time extension means parents can more easily collect their children from school. Two variables indicating the compatibility of parentsô working hours with morning and afternoon school times were used in the models presented. Above the age of 10, when children start middle school, school starting and finishing times may be more variable. However, up to the age of 15 at least, the school day from 8.30 am to 4.30 pm remains the dominant model.

Interactions between partners examined in two models with instrumental variables

In order to introduce interactions into log models between escorting trips, a problem of endogeneity has to be overcome. If one tries to explain the likelihood that one of the parents escorts the children in the morning by the fact that they did or did not escort the children in the afternoon, it is obvious that the cause and effect may work in both directions. A parent who collects the children in the afternoon will be less likely to take them in the morning; but a parent who takes them in the morning will also be less likely to collect them in the afternoon.

We therefore construct four models with instrumental variables to predict the likelihood of escorting in the morning and the afternoon for each of the parents. These are standard logistic regression models. The instruments used are a set of socio-demographic variables similar to those presented below in the final models. These probabilities of escorting the children are then used as explanatory variables in the models to capture any interaction between escorting trips.

RESULTS

Factors affecting escorting for dual-earner families: few differences between men and women

Among the dual-earner households studied, 55% of parents escorted their children at least once on the survey day. This figure ranges from more than 70% for households with at least one child under the age of 6 to 31% when the household has at least one grown-up child. Escorting is usually done by women since almost half of mothers escort their children versus less than one-third of fathers (Table 1). Far more mothers than fathers escort both mornings and afternoons, and a few more mothers than fathers escort just in the mornings, which is consistent with observations in other countries. A relative balance is found between fathers and mothers for escorting in the afternoons alone. However, it can be observed that some characteristics of womenôs employment may be related to these gender differences. More women begin work after 8.30 am, giving them the opportunity to escort their children.

TABLE 1 Descriptive variables of dual-earner households with one or more children

Variables		Men		Women	
		N	%	N	%
Escorting	None	922	72.0	709	55.4
	am and pm	46	3.6	202	15.8
	Am	156	12.2	208	16.2
	Pm	157	12.3	162	12.6
Employment	Public sector	316	24.7	456	35.6
	Private sector	827	64.6	746	58.2
	Liberal profession	138	10.8	79	6.2
Work starting time	> 08:30	676	52.8	479	37.4
	< 08:30	605	47.2	802	62.6
Work finishing time	> 18:00	657	51.3	490	38.2
	< 18:00	624	48.7	791	61.8
08:30 > working day > 18:00		233	18.2	109	8.5
08:30 < working day > 18:00		424	33.1	381	29.7

08:30 > working day < 18:00		443	34.6	370	28.9
08:30 < working day < 18:00		181	14.1	421	32.9
Urban commuting distance		11.5 km		8.1 km	
Outer suburban commuting distance		12.4 km		10.5 km	
Rural commuting distance		21.6 km		17.7 km	
		Household			
		N		**%**	
Number of children	1	580		45.3	
	2	554		43.3	
	3 and more	147		11.4	
Children aged under six	None	670		52.3	
	1 or more	611		47.7	
Adult children (over 18)	None	1074		83.8	
	1 or more	207		16.2	
Number of cars	None	83		6.5	
	1	530		41.3	
	2 or more	668		52.1	
Area of residence	Urban	1051		82.0	
	Outer suburbs	135		10.5	
	Rural	95		7.4	

TABLE 2 Logistic Model: Probability the father escorts both mornings and afternoons, mornings only or afternoons only

		Estimate	**Std. Error**	**t-value**	**Pr(>|t|)**	
am and pm		-5.7	1.3	-4.525	6E-06	***
am		-5.8	0.97	-5.831	5E-09	***
pm		-3.7	0.73	-5.039	5E-07	***
am and pm	Mother escorts am	-0.44	0.3	-1.445	0.148	
am	Mother escorts am	-0.56	0.18	-2.930	0.003	**
pm	Mother escorts am	0.51	0.2	2.530	0.011	*
am and pm	Mother escorts pm	-0.32	0.21	-1.522	0.128	
am	Mother escorts pm	0.16	0.13	1.264	0.206	
pm	Mother escorts pm	-0.45	0.12	-3.562	0.000	***
am and pm	Private sector employment	-0.18	0.35	-0.530	0.596	
am	Private sector employment	0.066	0.23	0.284	0.776	
pm	Private sector employment	-0.59	0.21	-2.850	0.004	**
am and pm	Liberal profession	-1.5	0.81	-1.857	0.063	.
am	Liberal profession	-0.3	0.36	-0.838	0.401	
pm	Liberal profession	-1.3	0.45	-2.921	0.003	**
am and pm	Start work > 08:30	0.1	0.34	2.960	0.003	**
am	Start work > 08:30	1.7	0.23	7.177	7E-13	***
pm	Start work > 08:30	-0.15	0.22	-0.701	0.483	
am and pm	Finish work < 18:00	1.2	0.36	3.381	0.001	***
am	Finish work < 18:00	-0.72	0.22	-3.213	0.001	**
pm	Finish work < 18:00	1.9	0.26	7.730	1E-14	***
am and pm	Commute (m)	-5.0E-05	1.8E-05	-2.677	0.007	**
am	Commute (m)	-4.9E-06	8.7E-06	-0.567	0.570	
pm	Commute (m)	-1.2E-05	8.5E-06	-1.365	0.172	
am and pm	2 children	0.38	0.37	1.029	0.303	
am	2 children	0.61	0.23	2.571	0.010	*
pm	2 children	-0.19	0.23	-0.829	0.407	
am and pm	3 or more children	0.045	0.51	0.087	0.930	
am	3 or more children	0.74	0.29	2.595	0.009	**
pm	3 or more children	7.3E-03	0.32	0.023	0.981	
am and pm	1 or more children under 6	0.98	0.44	2.228	0.026	*
am	1 or more children under 6	0.86	0.26	3.302	0.001	***
pm	1 or more children under 6	0.93	0.28	3.393	0.001	***
am and pm	1 or more adult children	-2.0	0.81	-2.448	0.013	*

am	1 or more adult children	-0.59	0.41	-1.449	0.147	
pm	1 or more adult children	-0.44	0.44	-0.989	0.323	
am and pm	1 car	0.99	0.95	1.053	0.292	
am	1 car	1.9	0.82	2.317	0.020	*
pm	1 car	0.68	0.51	1.346	0.178	
am and pm	2 or more cars	0.95	0.97	0.979	0.328	
am	2 or more cars	2.3	0.83	2.779	0.005	**
pm	2 or more cars	0.84	0.52	1.615	0.106	
am and pm	Home in outer suburbs	0.99	0.43	2.310	0.021	*
am	Home in outer suburbs	0.066	0.32	0.208	0.835	
pm	Home in outer suburbs	0.19	0.29	0.654	0.513	
am and pm	Home in rural area	1.1	0.55	2.030	0.042	*
am	Home in rural area	-0.13	0.37	-0.342	0.732	
pm	Home in rural area	0.45	0.34	1.314	0.189	

TABLE 3 Logistic Model: Probability the mother escorts both mornings and afternoons, mornings only or afternoons only

		Estimate	Std. Error	t-value	Pr(>|t|)	
am and pm		-5.2	0.86	-6.053	1E-09	***
am		-3.7	0.85	-4.359	1E-05	***
pm		-3.2	0.92	-3.480	0.000	***
am and pm	Father escorts am	-0.22	1.1	-2.002	0.045	*
am	Father escorts am	-0.29	0.11	-2.653	0.008	**
pm	Father escorts am	0.27	0.12	2.363	0.018	*
am and pm	Father escorts pm	-0.29	0.1	-2.915	0.003	**
am	Father escorts pm	0.21	0.099	2.086	0.037	*
pm	Father escorts pm	-0.37	0.11	-3.506	0.000	***
am and pm	Private sector employment	-0.15	0.19	-0.789	0.430	
am	Private sector employment	0.43	0.20	2.153	0.031	*
pm	Private sector employment	-0.25	0.20	-1.250	0.211	
am and pm	Liberal profession	-1.0	0.47	-2.215	0.027	*
am	Liberal profession	0.10	0.38	0.274	0.784	
pm	Liberal profession	0.082	0.39	0.208	0.835	
am and pm	Start work > 08:30	0.83	0.19	4.240	2E-05	***
am	Start work > 08:30	1.2	0.22	5.757	9E-09	***
pm	Start work > 08:30	-0.48	0.19	-2.488	0.013	*
am and pm	Finish work < 18:00	1.3	0.21	6.439	1E-10	***
am	Finish work < 18:00	-0.16	0.18	-0.897	0.369	
pm	Finish work < 18:00	1.7	0.26	6.545	6E-11	***
am and pm	Commute (m)	-4.6E-05	1.2E-05	-3.946	8E-05	***
am	Commute (m)	-3.4E-05	1.1E-05	-3.139	0.002	**
pm	Commute (m)	4.5E-06	9.7E-06	0.470	0.638	
am and pm	2 children	0.49	0.19	2.642	0.009	**
am	2 children	0.39	0.18	2.152	0.031	*
pm	2 children	-0.065	0.21	-0.314	0.753	
am and pm	3 or more children	0.18	0.31	0.581	0.560	
am	3 or more children	-0.022	0.31	-0.071	0.943	
pm	3 or more children	0.26	0.29	0.903	0.367	
am and pm	1 or more children under 6	1.5	0.22	6.646	3E-11	***
am	1 or more children under 6	0.72	0.22	3.272	0.001	**
pm	1 or more children under 6	1.0	0.23	4.494	7E-06	***
am and pm	1 or more adult children	-1.7	0.40	-4.255	2E-05	***
am	1 or more adult children	-1.2	0.32	-3.714	0.000	***
pm	1 or more adult children	-0.29	0.32	-0.904	0.366	
am and pm	1 car	0.77	0.53	1.468	0.142	
am	1 car	0.89	0.51	1.757	0.078	.
pm	1 car	0.066	0.61	0.108	0.913	
am and pm	2 or more cars	1.4	0.53	2.625	0.009	**

am	2 or more cars	1.3	0.52	2.554	0.010	*
pm	2 or more cars	0.21	0.62	0.334	0.738	
am and pm	Home in outer suburbs	0.23	0.30	0.806	0.420	
am	Home in outer suburbs	5.5E-03	0.28	0.018	0.984	
pm	Home in outer suburbs	0.17	0.30	0.574	0.566	
am and pm	Home in rural area	0.94	0.31	3.070	0.002	**
am	Home in rural area	-0.077	0.36	-0.213	0.831	
pm	Home in rural area	0.23	0.34	0.687	0.492	

The first model (Table 2) predicts the likelihood that fathers will escort the children in the mornings or in the afternoons or both. The second model (Table 3) predicts the same probabilities for mothers. The main explanatory variables of the two models work in similar ways: the start and finish times of work for the parents and the presence of children under the age of 6 in the household. The presence of young children has a very positive effect on the probability of escorting in the mornings and/or afternoons for fathers and mothers. For working hours, a late start increases the probability of escorting in the mornings only or mornings and afternoons. Conversely, an early finish increases the likelihood of children being escorted in the afternoons only or mornings and afternoons. Apart from the main explanatory variables, two other factors have significant effects on the probability of parents escorting children. The likelihood of escorting in the mornings increases for parents in households with several children and for those with one or more cars. The likelihood of escorting mornings and afternoons is also greater for mothers in households with two children and/or two or more cars.

Concerning our hypotheses, the factors of gender inequality seem somewhat reduced in these first two models. The first relates to the type of occupation, the second to the presence of a third adult in the household. Thus men who are private sector employees or in the professions are less likely to escort children in the afternoons than are men who are public sector employees. For women in similar occupations, there is no significant reduction in the likelihood of them escorting their children according to type of occupation except for escorting them in the mornings for private sector workers and for double escorts (mornings and afternoons) for those in the professions. Conversely, the presence of an adult child (over 18 which is legal age of majority in France) significantly reduces the likelihood the mother will escort the children in the mornings or mornings and afternoons. For the partner, the presence of a third adult reduces only the probability of morning and afternoon escorts and barely significantly. For afternoon escorts, the presence of a third adult has no significant effect, even for mothers. It can be postulated that afternoon escorts are those which weigh somewhat less heavily on mothers (Table 3), even if they still perform them more often than fathers. The second hypothesis relates to forms of interaction between parents. In the first series of models, there are two types of interaction. First, if one parent escorts the children in the mornings or afternoons, the likelihood that the other parent escorts the children in the same time slot is very low. Just one parent seems to escort in a given time slot. Secondly, if one parent escorts in the mornings, it is much more likely that the other parent will escort the children in the afternoons. Parents are complementary between mornings and afternoons. The final hypothesis relates to the existence of a spatial dimension of escorting. Such an effect is not very frequent in models. Only living in a rural area significantly increases the likelihood of escorting both mornings and afternoons. The same is true for the outer suburbs, but for fathers only. This result is presumably because parents are more likely to escort children when they live in the outer suburbs and in low density areas where schools are often furthest from home. Less directly, the models tend to show that the commuting distance reduces the propensity to escort both mornings and afternoons for fathers and for mothers, and to escort children in the mornings for mothers. Thus the distance between home and work might have a negative overall effect on the likelihood of escorting children in dual-earner households in the outer suburbs and rural areas, given that these distances generally increase as one moves away from the city centre.

In which cases do fathers do more escorting than mothers?

For parents who escort their children in the mornings only, in more than two-thirds of instances it is the mother who does this (Table 4). Yet in nearly half of households (49.1%), fathers have working hours that are compatible with taking children to school in the mornings. In our sample, more women use public transport which is less amenable to escorting practices *(25)*, especially in the mornings.

TABLE 4 Descriptive variables of households escorting in the mornings

Variables		N	%
Escorting	Mother	372	69.5
	Father	164	30.5
Start work > 08:30	None	85	15.8
	Mother	188	35.0
	Father	77	14.3
	Both	187	34.8
Fatherôs transport mode	Public transport	137	25.6
	Car	345	64.4
	Foot	53	9.9
Motherôs transport mode	Public transport	192	35.9
	Car	301	56.2
	Foot	42	7.9
Adult child	None	498	92.9
	1 or more	38	7.1
Home area	Urban	437	81.4
	Outer suburbs	55	10.3
	Rural	44	8.3

The model below (Table 5) predicts the probability of fathers escorting more than mothers in the mornings. The main explanatory variable relates to the work starting times. Unsurprisingly, the likelihood that fathers will do the escorting is greater when their working hours are compatible with those of the school and when the mothersô working hours are incompatible. Conversely, the probability fathers will escort children is far lower when their work starting times are not compatible with school times and mothersô working hours are. Where both parentsô working hours are compatible, no trend stands out. Intuitively, in such a situation, it would be expected that mothers would do more of the escorting. For all the other variables in the model, symmetry of effects between fathers and mothers can be observed. For example, having just one car increases the likelihood that the parent using that means of transport for going to work will also escort the children. Similarly, making a big detour on the journey to work to drop off the children (materialised by the level of effort to deviate from oneôs route) reduces the likelihood of escorting for fathers and mothers alike. There is therefore no amplification of the asymmetry between men and women with respect to the factors that prompt them to escort the children, at least for those parents who do escort their children. That women do most of the escorting in the mornings seems therefore to be related to a structure effect: more women than men apparently have working hours that are compatible with escorting, somewhat more limited access to car use, and jobs closer to home.

TABLE 5 Logistic Model: Probability that the father rather than the mother will escort the children in the mornings (only households escorting in the mornings)

		Estimate	Std.Error	t-value	Pr(>|t|)	
Father escorts		-0.95	0.44	-2.148	0.032	*
Father escorts	Start work mother > 08:30	-21	0.41	-5.162	2E-07	***
Father escorts	Start work father > 08:30	1.5	0.37	4.122	4E-05	***
Father escorts	Start work both > 08:30	0.28	0.31	0.864	0.387	
Father escorts	Car father	0.63	0.30	2.116	0.034	*
Father escorts	Foot father	-4.2E-03	0.47	-0.009	0.993	
Father escorts	Car mother	-0.58	0.27	-2.093	0.036	*
Father escorts	Foot mother	-0.35	0.49	-0.698	0.485	
Father escorts	1 or more adult children	0.66	0.41	1.618	0.106	
Father escorts	Commute father (m)	-3.9E-05	1.2E-05	-3.385	0.001	***
Father escorts	Commute mother (m)	6.3E-05	1.5E-05	4.064	5E-05	***
Father escorts	Level of effort father	-2.5E-04	8.5E-05	-2.978	0.003	**
Father escorts	Level of effort mother	3.2E-04	8.5E-05	3.758	0.000	***

Father escorts	Home in outer suburbs	-0.21	0.36	-0.582	0.561
Father escorts	Home in rural area	-0.45	0.44	-1.003	0.316

Escorting in the evenings is in the great majority of instances done by women too, in a ratio of 1 to 2 (Table 6). Later work finishing times for men are amenable to more escorting for women than for men in the afternoons. The model predicting the likelihood of escorting in the afternoons for men compared with women shows, as for the morning model, a degree of symmetry of effects between men and women (Table 7). However, work finishing times aside, there is less symmetry for afternoon than for morning escorting. Thus, the length of the commute of one parent significantly increases the likelihood that the other will escort more in the afternoons, but less so than in the mornings. Moreover, the symmetry observed in the mornings in terms of car use or level of effort disappears. In the evenings, the likelihood the father will escort more than the mother depends above all on the fact that the mother travels by car or has a sizeable level of effort.
To conclude, in these two models, the spatial dimension does not seem to be directly involved since the household residential area has little or no effect on escorting by one parent rather than the other.

TABLE 6 Descriptive variables of households escorting in the afternoons

Variables		N	%
Escorting	Mother	330	66.2
	Father	169	33.8
Finish work < 18: 00	Neither	64	12.9
	Mother only	182	36.6
	Father only	92	18.5
	Both	160	32.0
Fatherôs transport mode	Public transport	140	28.0
	Car	313	62.6
	Foot	47	9.4
Motherôs transport mode	Transports publics	185	37.1
	Car	278	55.7
	Foot	36	7.2
Adult child	None	458	91.8
	1 or more	41	8.2
Home area	Urban	399	79.9
	Outer suburbs	55	10.9
	Rural	46	9.2

TABLE 7 Logistic Model: Probability that the father escorts in the afternoons rather than the mother (only for households escorting in the afternoons)

		Estimate	Std.Error	t-value	Pr(>|t|)	
Father escorts		-0.35	0.453	-3.771	0.437	
Father escorts	Finish work mother < 18:00	-2.3	0.431	-5.427	6E-08	***
Father escorts	Finish work father < 18:00	2.1	0.389	5.492	4E-08	***
Father escorts	Finish work both < 18:00	0.11	0.329	0.341	0.732	
Father escorts	Car father	4.6E-03	0.297	0.015	0.987	
Father escorts	Foot father	-0.29	0.489	-0.599	0.549	
Father escorts	Car mother	-0.60	0.294	-2.041	0.041	*
Father escorts	Foot mother	-0.52	0.564	-0.924	0.355	
Father escorts	1 or more adult children	0.50	0.429	1.155	0.248	
Father escorts	Commute father (m)	-2.9E-05	1.23E-05	-2.401	0.016	*
Father escorts	Commute mother (m)	3.4E-05	1.54E-05	2.217	0.027	*
Father escorts	Level of effort father	-6.5E-05	4.62E-05	-1.415	0.157	
Father escorts	Level of effort mother	1.5E-04	6.17E-05	2.504	0.012	*
Father escorts	Home in outer suburbs	0.67	0.372	1.792	0.073	.
Father escorts	Home in rural area	-0.16	0.449	-0.349	0,727	

DISCUSSION

In dual-earner families in Ile-de-France, half escort their children, and those with young children escort them more than those whose children are adults. Unsurprisingly, women escort twice as much as men, conducting two-thirds of the escorts. Above all, gender inequalities are marked by the proportion of women accompanying both mornings and afternoons. They are four times as many and represent 35% of women who escort their children.

Observation of gender differences with respect to the factors that lead parents to escort their children reveals that the main factors are common to men and women. They produce the same type of effect on the likelihood of escorting, especially in the mornings and to a lesser degree in the afternoons. These factors are, by order of importance, the presence of young children in the household, work starting and finishing times, and their compatibility with the child-care or school times. Differences between men and women are few and have little effect in the respective models predicting the probability of escorting. However, men escort less in the afternoons when they are private sector employees or in the professions whereas women who are employed in the private sector escort more in the mornings. Next, men are more likely to escort in the mornings the more children they have, while this effect is weak or non-existent for women. Lastly, and conversely, the presence of a grown-up child in the household greatly reduces the probability women will escort in the mornings or afternoons. However, for men, these effects are weak (mornings and afternoons) but above all non-existent. Moreover, women appear more sensitive to the length of their commutes for escorting in the mornings and for morning and afternoon escorting.

This first series of results highlights the slight gender differences as to the determinants of escorting practices for dual-earner households that can be captured with this type of model. The explanations for the very marked inequality between men and women in escorting are therefore to be sought ahead of the escorting decisions. The models reveal that the parentsô employment conditions are the main determinants of the decision to escort. The motherôs working day is often more compatible with escorting than the fatherôs, especially in terms of starting and finishing times, commuting distance, type of employment and means of transport. She then does most of the escorting. Unfortunately, the HTS does not enable us to determine whether the motherôs choice of a job which is compatible with escorting is dictated by the need to ensure such escorting or whether there are other determinants.

The second series of models pertaining to escorting dual-earner households confirms the observation about unequal escorting between parents prompted by the difference between their working days rather than by greater investment by mothers, regardless of the constraints of their working day and of the fathersô working day. The second series of models shows symmetry between parents of the effects of factors affecting escorting. This symmetry is stronger overall in the mornings than the afternoons, which might be in part because there is more escorting in the mornings than in the afternoons. Thus for dual-earner households, gender inequality in their escorting practices lies in the choice of employment and the working day it involves. Many results show that women in dual-earner households tend to have jobs with shorter and more flexible working hours, jobs that are closer to home and that allow them to do most of the care-giving and escorting for the children *(12)*.

The link for escorting between the partners and/or between afternoon and morning revealed in the Netherlands *(3)* is also apparent in the case of Paris and is negative, particularly in the morning. A negative link is also apparent between the probability of one partner conducting escorting trips both in the morning and afternoon. These effects express what emerged from the descriptive analysis: the dominant model is that of a household where a single partner is responsible for escorting either in the morning or in the evening. The strongest and most systematic effect involves a link between the partners for escorting trips during a given half day, which we shall characterize as optimization by the sharing of escorting trips between the couple before and after work. This sharing, which we shall characterize as complementarity, occurs when one partner takes on escorting duties before work and the other does so after work. The probability of complementarity between the partners with regard to escorting is low.

A final element is the spatial dimension of escorting practices. Parents in dual-earner households escort their children when they live in the outer suburbs of cities, in low-density areas. Schools there are less commonly within walking distance but there are also no safe and pleasant paths for pedestrians. Yet the spatial effect identified remains slight and is applicable only in certain cases. It tends to increase the likelihood that one of the parents will escort the children in the mornings or

afternoons. Children are escorted more systematically in such areas. This effect is more striking because longer average commuting distances in these areas tend to reduce the likelihood of parents escorting their children. The spatial dimension of escorting practices therefore arises less directly, through commuting distances or levels of effort which appear to be greater in less densely populated areas. These variables act more significantly on the relative likelihood of escorting by one or other of the parents.

CONCLUSION

Exploitation of the HTS for Ile-de-France reveals that the practice of escorting children differs between men and women within dual-earner households, with mothers being more active than fathers. Nonetheless, in dual-earner households, interactions are often at work in the sharing of escorting since the escorting practices of one parent affect the practices of the other parent. To return other research *(11)*, interactions between fathers and mothers most probably result in complementarity (if one escorts at one time, the other will have significantly less chance of escorting at the same time) or specialisation (just one parent takes charge of all escorting) (H2). More generally, looking at factors which influence escorting by one or other parent and especially the factors relating to the other parent (work times, commuting distance, etc.), these factors operate in similar ways on the escorting of children and the way it is shared. All else being equal, differences in escorting practices between mothers and fathers would seem to be minimal (H1).

But, in terms of gender and the sharing of activities within the household, all else is far from equal. If there is parity between the partners in terms of activity or of residential location, many inequalities remain in terms of employment conditions (working hours, location, etc.), modes, etc. These differences necessarily affect the population structure and ultimately the escorting practices that depend on it. The results presented are therefore the outcome of a structure effect related both to the conditions in which our sub-sample was selected and to the gendered inequalities in the sharing of daily activities and trips. A better understanding of the inequalities in terms of escorting would require a better understanding of the gender-based distribution of all of the householdôs travel patterns.

Inequalities in terms of domestic activities and more especially of care-giving for children are largely determined by the socio-spatial or cultural characteristics of the populations under study *(26)*. The greater propensity of women in France to work part time seems to explain why an activity like escorting is less evenly shared than in other countries, especially Scandinavia. On a finer scale, like that of Ile-de-France and its various areas, these differences are not readily observable, here again because of the selection of our sub-sample of dual-earner households. This selection bias would explain why spatial variables have little effect on escorting trips within our population (H3).

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