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► **To cite this version:**

Laurent Lesnard, Jean-Yves Boulin. The Social consequences of sunday work in the USA. 40th International Association for Time Use Research Conference: Conference info, Oct 2018, Budapest, Hungary. hal-02168163

HAL Id: hal-02168163

<https://hal.science/hal-02168163>

Submitted on 28 Jun 2019

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The Social Consequences of Sunday Work in the USA

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Introduction

- Why are we interested by the incidence of Sunday work on uses of time?
 - Sunday is a specific day in the week: work (and many other activities including leisure) has been banned on this day in most of the Christian area countries since 321 AD (the ban had progressively expanded all over the world)
 - In the USA, the ban has been rigorously implemented from the 17th century until mid 20th century (blue laws)
 - The work and spent ethic which emerged in the 1920's has progressively driven to trivialise Sunday work, particularly in services activities (mostly retail and leisure activities)

Literature review and our contribution

- Lot of historical and socio cultural literature but very few looking at Sunday's work impact on employee's uses of time
- An exception: Michael Bittman's paper in 2005
- Two differences with Bittman's work :
 - We make a distinction between Sunday's work at home and Sunday's work at the workplace
 - We measure the additional impact of one hour worked on Sunday compared to one hour worked on a weekday (which, trivially speaking, has a mechanical impact on time use)

Hypotheses

- H1 – Sunday is, along with the Saturday, the day of leisure and time spent together with family and friends
- H2 – Sunday's work is a predictor of inequalities concerning time sovereignty
 - H2a: The higher socio-economic status, the higher the probability of Sunday being worked at home
 - H2b: Conversely, the lower the SES, the higher the probability of Sunday work at the workplace
- H3 – each hour of work performed the workplace has more impact on leisure and time together when it is worked on Sunday than during a weekday

Data and methods

Data

- American Time Use Survey (ATUS)
 - 2003-2016 editions pooled
 - N = 181,335
- Measurement: diaries
 - Location: Work at home VS. work at the workplace
 - With whom
 - Conjugal time (without children)
 - Parents and children
 - One parent and children
 - Time spent with friends
 - TV vs. Other leisure

Methods – H1

- H1 – Sunday is, along with the Saturday, the day of leisure and time spent together with family and friends
- Simple linear regressions of leisure and time together on the day of week
 - Weekday is the reference category
 - No other variables (by definition)

Methods – H2

- H2 – Sunday's work is a predictor of inequalities concerning time sovereignty
 - H2a - The higher socio-economic status, the higher the probability of Sunday work at home
 - H2b - Conversely, the lower the SES, the higher the probability of Sunday work at the workplace
- Logistic regressions of Sunday work at home and at the workplace
 - Variable of interest: Detailed occupation as a proxy for SES
 - Controls: gender, age, education, industry, year, State, etc.

Methods – H3

- H3 – each hour of work at the workplace has more impact on leisure and time together on Sunday than during the week
- Multiple regressions
 - Ordinary least squares (OLS)
 - 2-stage least squares (2SLS) when hours of work at home are endogenous
- Test: interaction variable between the day of the week and hours of work
- Controls: gender, age, education, industry, year, State, etc.

Results

H1

Dependent variable	Mean weekday (intercept)	Saturday effect	P-value	Sunday effect	P-value
Leisure (without TV)	120.92	63.09	0.00	39.41	0.00
TV	151.84	31.15	0.00	52.11	0.00
Time with partner	105.64	46.69	0.00	57.66	0.00
Time with partner and children	14.25	14.03	0.00	16.31	0.00
Time with children	33.90	3.37	0.00	1.29	0.06
Time with friends	46.14	40.86	0.00	15.86	0.00

Time in minutes

H1

Dependent variable	Mean weekday (intercept)	Saturday effect	P-value	Sunday effect	P-value
Leisure (without TV)	120.92	63.09	0.00	39.41	0.00
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Time with friends	46.14	40.86	0.00	15.86	0.00

Time in minutes

H1

Dependent variable	Sunday effect	P-value
Leisure (without TV)	+ 39.41	0.00
TV	+ 52.11	0.00
Time with partner	+ 57.66	0.00
Time with partner and children	+ 16.31	0.00
Time with children	1.29	0.06
Time with friends	+ 15.86	0.00

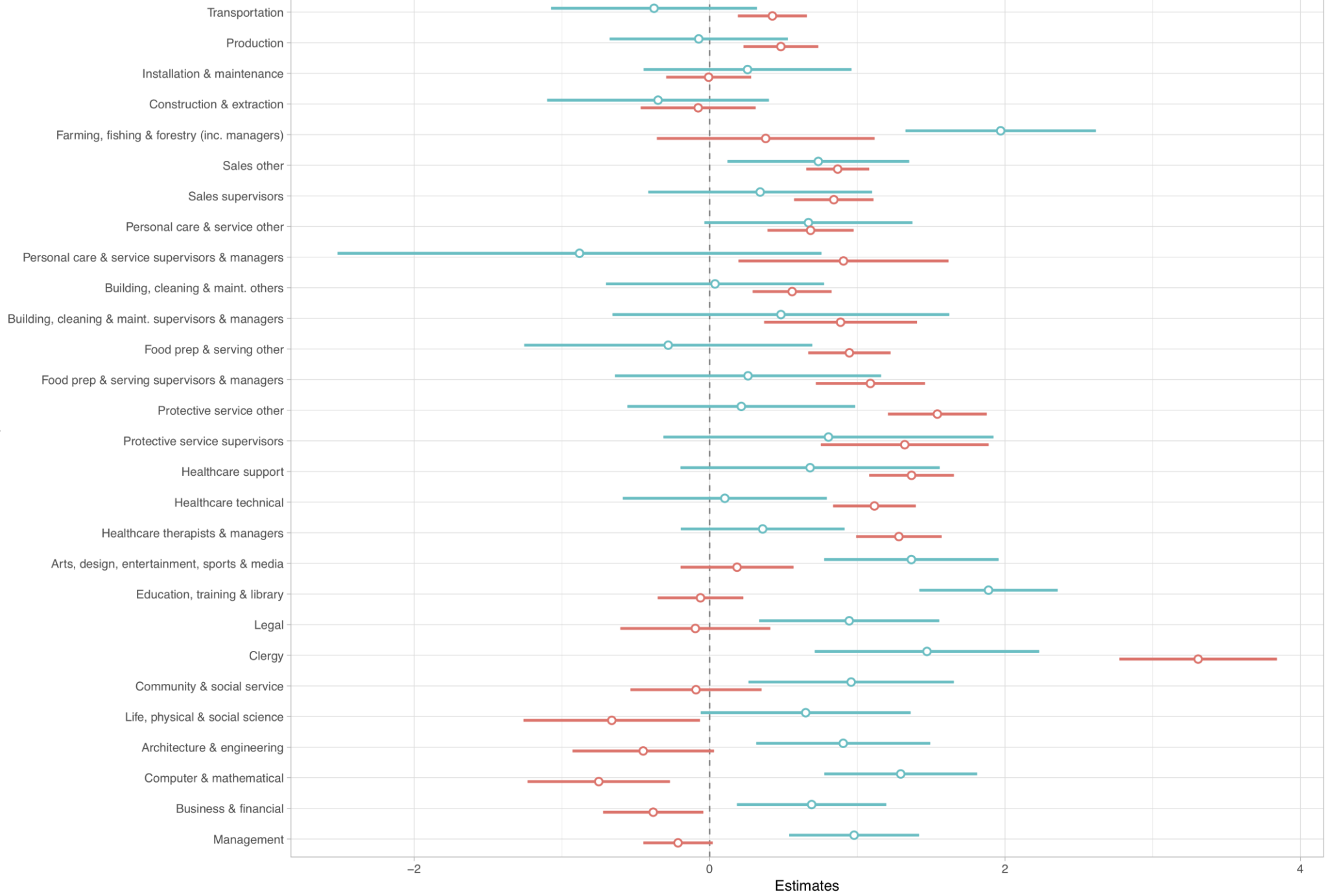
Time in minutes

H2

Social status



Occupations



Model Sunday work at the workplace Sunday work at home

H3

Variables	Modalities	Leisure	TV	Couple	Couple & children	Mother & children	Father & children	Friends
Intercept		143.41 ***	166.99 ***	151.10 ***	106.01 ***	187.44 ***	108.80 ***	56.75 ***
Day	Saturday	39.76 ***	10.42 ***	47.44 ***	39.78 ***	-36.97 ***	-2.59	29.16 ***
	Sunday	-2.17	28.59 ***	50.36 ***	35.69 ***	-57.34 ***	-14.92 ***	-5.59 *
Hours of work workplace		-10.04 ***	-10.72 ***	-12.80 ***	-5.03 ***	-13.11 ***	-5.55 ***	-5.52 ***
Hours of work at workplace x day	Saturday	-2.16 ***	-0.78 *	-3.60 ***	-3.36 ***	3.37 ***	-0.42	-1.47 ***
	Sunday	0.34	-1.30 ***	-3.57 ***	-2.77 ***	4.83 ***	1.10 *	0.12
Hours of work at home		-9.08 ***	-15.64 ***	-9.12 ***	-4.34 ***	-4.68 ***	-3.56 ***	-4.27 **
Hours of work at home x day	Saturday	1.73	-46.48 ***	-1.99	-0.39	4.34	3.74 **	5.81
	Sunday	13.69 ***	-48.71 ***	-2.26	-1.83	6.72 **	3.34 *	8.72 *
N		100.005	100.005	58.625	32.041	20.218	19.245	100.005
R2		0.16	0.11	0.28	0.28	0.22	0.12	0.12
Adjusted R2		0.16	0.11	0.27	0.28	0.22	0.12	0.12

Time in minutes

H3

Time in minutes

For each hour
of work

Additional

Dependent variable

workplace

Sunday effect

Leisure (without TV)

-10.04 ***

0.34

TV

-10.72 ***

-1.30 ***

Time with partner

-12.80 ***

-3.57 ***

Time with partner and children

-5.03 ***

-2.77 ***

Mother-children time

-13.11 ***

4.83 ***

Father children time

-5.55 ***

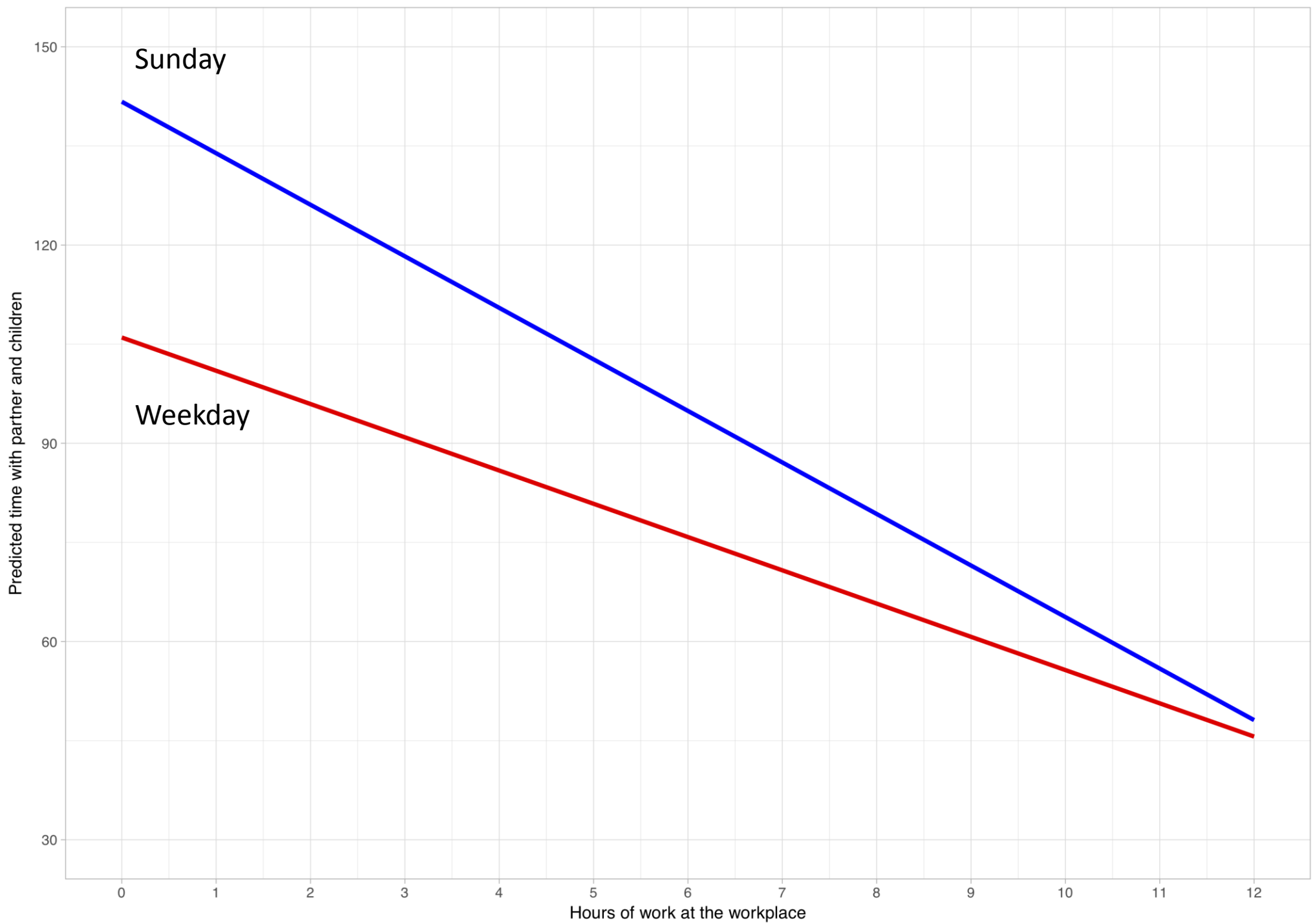
1.10 *

Time with friends

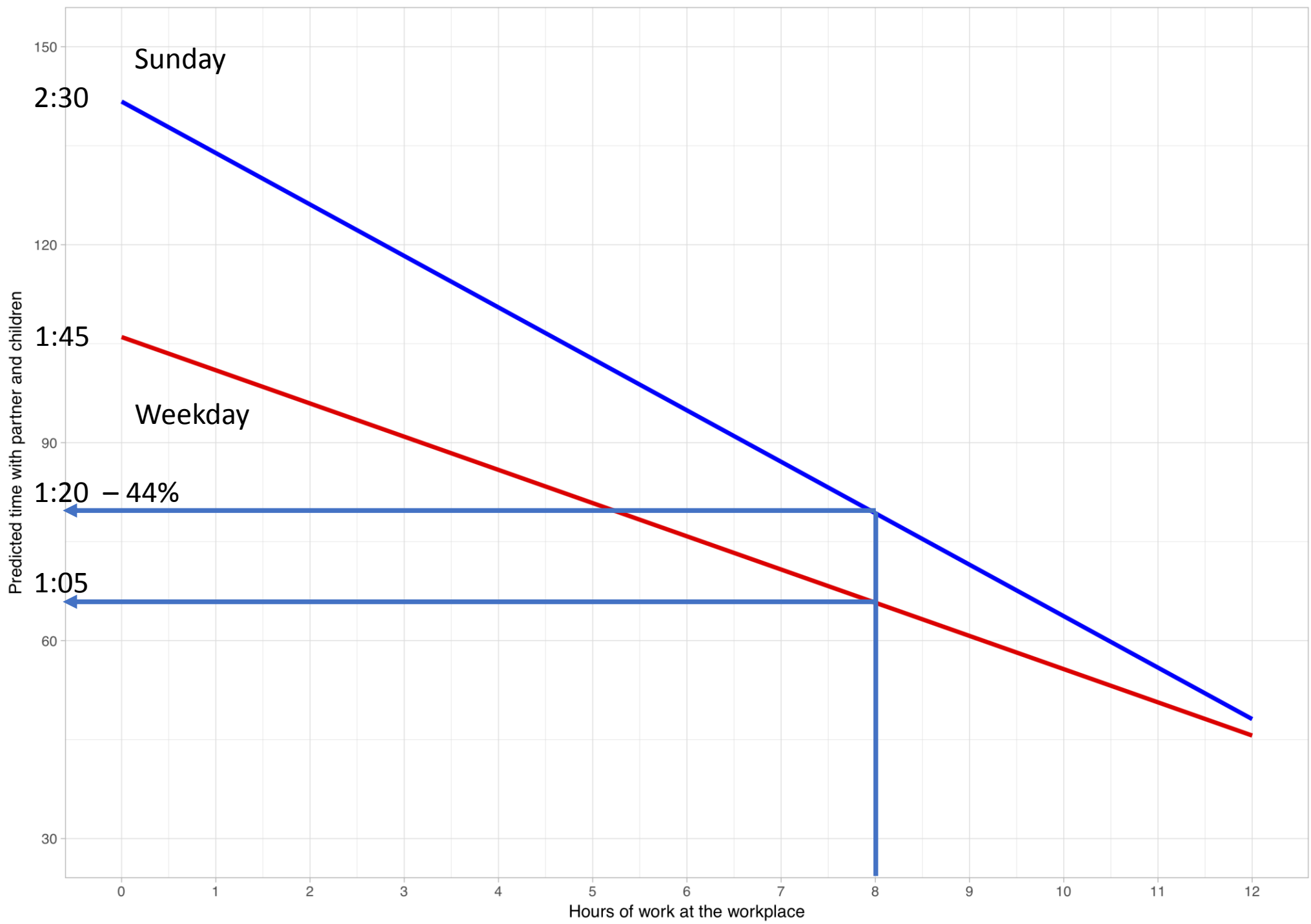
-5.52 ***

0.12

H3



H3



Conclusion

- Our three hypotheses are validated for the USA :
 - Sunday is still the day of leisure and time together
 - Sunday work at home is associated with high SES
 - Sunday work at the workplace is associated with low SES
 - Additional effect of Sunday work at workplace on leisure and time together
- These results tend to highlight the fact that Sunday'work is not only an economic, employment and business issue : it also has a strong social dimension.
- Our assumption is that the best level to decide what should be open on Sunday is the local level : local time policies/urban time policies

Thank you for your attention!

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Appendices

Appendices

- [Endogeneity tests](#)
- [Interaction effect](#)

Endogeneity tests

Dependent variable	F statistics	P-value
Leisure (without TV)	43.95	0.00
TV	7.32	0.00
Time with partner	2.24	0.08
Time with partner and children	1.23	0.30
Time with children	1.20	0.31
Time with friends	3.16	0.02

Interaction effect

- y = leisure or time together time
- w = work time
- day of week:
 - weekday is the reference (hence omitted)
 - z = Saturday
 - x = Sunday
- Model $y = a + b_1w + b_2x + b_3xw$

Interaction effect

- y = leisure or time together time
- w = work time
- day of week:
 - weekday is the reference (hence omitted)
 - z = Saturday
 - x = Sunday

• Model $y = a + b_1w + b_2x + b_3xw$

Leisure time for a weekday without work

Impact of each hour of work time on a weekday

Difference of leisure time between Sunday and a weekday without work

Additional impact of each hour of work on Sunday compared to a weekday