

Changing times: what can politicians learn from time use studies?

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Some lessons from time-use research:

1. Production *can* grow outside “the economy”
2. Public policy *can* make a difference to this
3. Economic growth *can* make daily life *worse*

(A selection of results from a report, **Time-use and Well-being**, commissioned by the ONS.

My own views, ONS not responsible)

Time use research

- Questionnaires have problems:
 - Eg “How much time did you work last week?”

Time use research

- Questionnaires have problems:
 - Eg “How much time did you work last week?”
- Alternative: large-scale **time diary** samples
- Diaries provide reliable measures of:
 - paid work,
 - unpaid work at home,
 - leisure time and activities

Morning Time, am	What were you doing? <i>Please record your main activity for each 10-minute period.</i>	What else were you doing? <i>Write in the most important activity you were doing at the same time</i>	Where were you? <i>e.g. At home, at friends, in car, on bus, train, cycling, walking</i>	Were you with anybody? <i>Please mark the boxes. See example on page 3.</i>				
	Enter one main activity on each line.			None or with people you don't know	Children up to 9 living in your household	Children aged 10 to 14 living in your household	Other household members	Other persons that you know
7:00 - 7:10	Sleeping			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7:10 - 7:20	↓			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7:20 - 7:30	Had a shower		At home	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7:30 - 7:40	Made breakfast		↓	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7:40 - 7:50	Ate breakfast	Read newspaper	↓	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7:50 - 8:00	Did washing up		↓	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8:00 - 8:10	Got my son dressed	Talked with my son	↓	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8:10 - 8:20	Walked to school with son	↓	Walking	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8:20 - 8:30	Dropped son off at school	↓	↓	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8:30 - 8:40	Walked to bus stop		↓	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8:40 - 8:50	Travel by bus to work	Read newspaper	On the bus	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8:50 - 9:00	↓	↓	↓	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9:00 - 9:10	↓	↓	↓	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9:10 - 9:20	Walked from bus stop to main job		Walking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9:20 - 9:30	↓		↓	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9:30 - 9:40	↓		↓	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9:40 - 9:50	Main job			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9:50 - 10:00	↓			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Multinational Time Use Study: 50 surveys, 20 countries, 550K days

(N of Days)	1961-69	1970-74	1975-84	1985-89	1990-94	1995-99	2000-
Canada		2138	2682	9618	8936	10726	
Denmark	4173			3584			
France	2898	4633				14631	
Netherlands			4019	3263	3158	3227	11851
Norway		6516	6068		6129		7904
UK	9292		14898	9206		1962	17248
USA	2021		7010	4935	9386	1151	20340
Finland			11908	15219		8354	1686
Italy				37764			51206
Australia		1491		3181	13937	14315	
Israel					3126		
Sweden					7065		7747
Germany	3687				22554		35813
Austria					25162		
South Africa							14217
Slovenia							12273
Spain							46774
Column total	22071	14778	46585	86770	99453	54366	227059
N surveys	5	4	6	8	9	7	11

1. Work and National Product

- Third person criterion:
 - “work is any activity you can pay a third party to do for you without losing the benefit from it”.

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- Hence:
 - unpaid household work, volunteering...
 - these *substitute for* paid work
 - “Extended National Product”

A National Time Budget: UK adults, 1961

(minutes per UK adult aged 18+)

	UK time _____							Non-UK
	leisure	unpaid work	UK paid work time _____					
			Med, Educ	M'gers, scientists	Other Serv	Manual	total	Impprt work
Sleep	564						564	
Shelter,nutrition	94	159	1	15	32	71	374	24
Home leisure	213	12	1	2	5	12	245	4
Out-Leis, shops	87	25	0	2	13	12	139	3
Med & Ed	5		12	2	10	8	37	2
B'ground servs			1	5	13	17	36	1
Exports			0	5	11	30	45	6
TOTAL	963	196	15	32	83	150	1440	40

A National Time Budget: UK adults, 2001

(minutes per UK adult aged 18+)

	UK time_____							Non-UK
	leisure	unpaid work	UK paid work time_____					
			Med, Educ	M'gers, scientists	Other Serv	Manual	total	Imprt work
Sleep	558						558	
Shelter,nutrition	65	147	3	17	18	25	276	22
Home leisure	244	24	2	3	4	4	281	3
Out-Leis, shops	136	52		3	10	5	206	4
Med & Ed	8		24	5	11	4	53	3
B'ground servs			2	8	10	6	25	1
Exported work			2	11	11	18	41	10
TOTAL	1011	224	34	47	62	62	1440	43

Shift in paid/unpaid work balance

All UK work time	Minutes/day	
	1961	2001
Paid work time	281	205
Unpaid work time	186	224
<i>total</i>	<i>477</i>	<i>429</i>
Paid as % of all work	59%	48%

Shift in paid/unpaid work balance

All UK work time	Minutes/day		
	1961	1984	2001
Paid work time	281	186	205
Unpaid work time	186	222	224
<i>total</i>	<i>477</i>	<i>407</i>	<i>429</i>
Paid as % of all work	59%	46%	48%



GNP extension: valuing unpaid work

- Two methods:

1 **Shadow wages**

- Assumes unpaid value=own marginal wage
- values home-baked cake for brain surgeon at 10 times value of ditto for pastry chef

2 **Shadow prices:**

- Either: specialist (eg taxi driver for school trip)
- Or “housekeeper wage”

UK National Product and Extended National Product Estimates

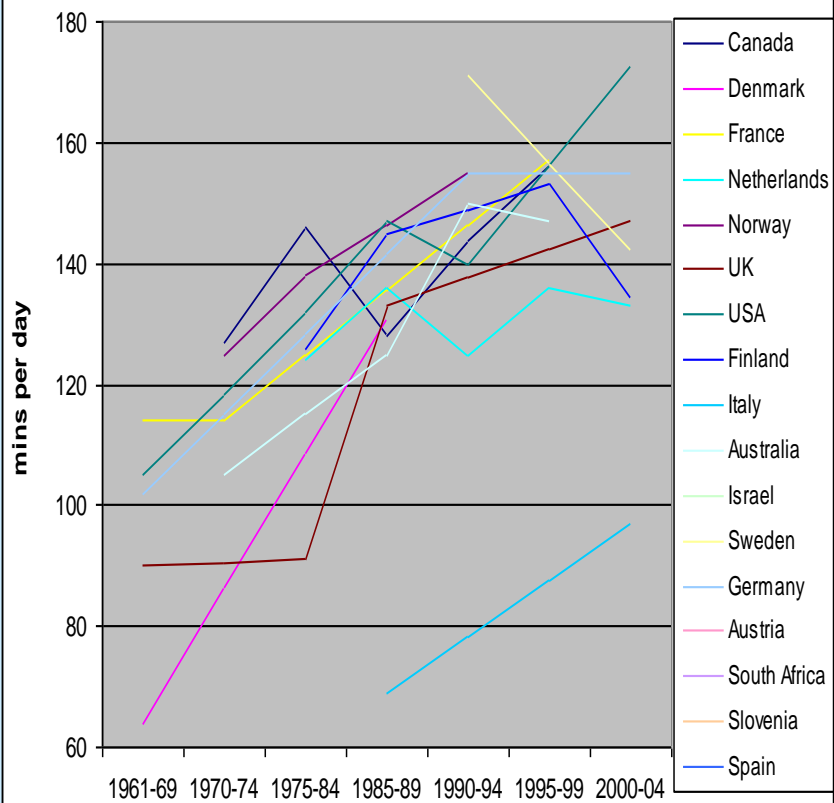
(based on activity patterns of population aged 20-65)

	Conventional National Product	Extended National Product	Extended NP as % of Conventional NP
1961	100	100	164
1984	162	199	201
2001	295	334	185

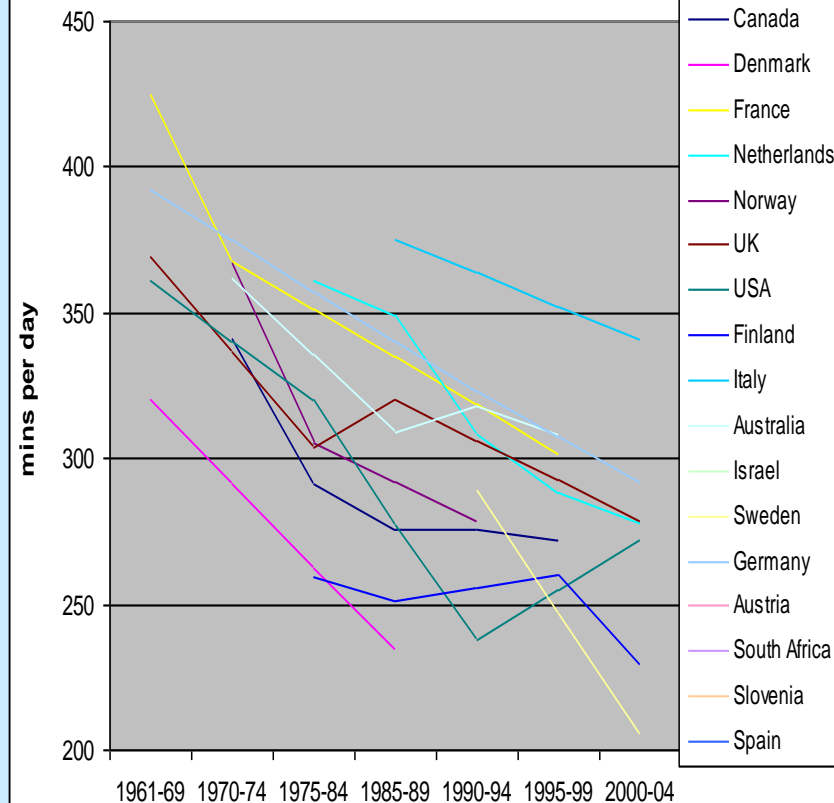
2. Does public regulation matter for daily life?

- Take example of unpaid work at home, from the Multinational Time Use Study
 - It's spaghetti diagram....

all unpaid work, men 20-59



all unpaid work, women 20-59



– It's spaghetti diagram....

–....until you look at

- **division of domestic labour**
- **by national welfare regime type**

Division of domestic labour

DODL time index =

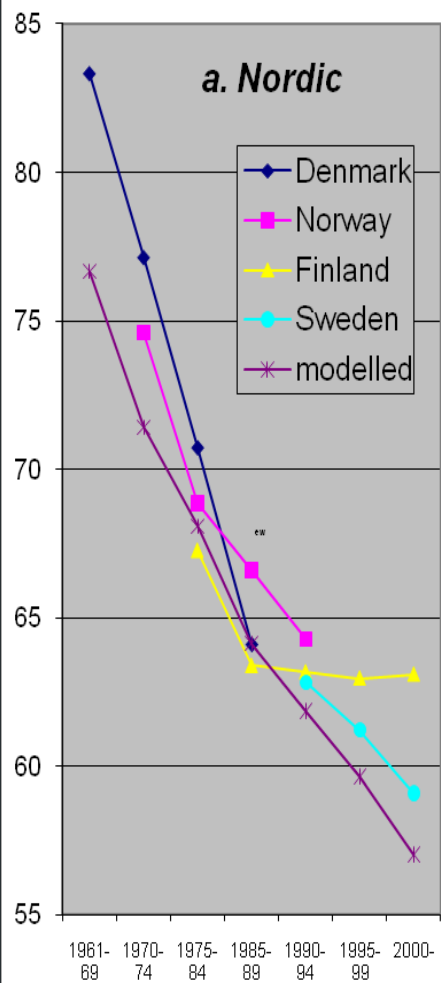
woman's unpaid labour

(man's unpaid labour + woman's unpaid labour)

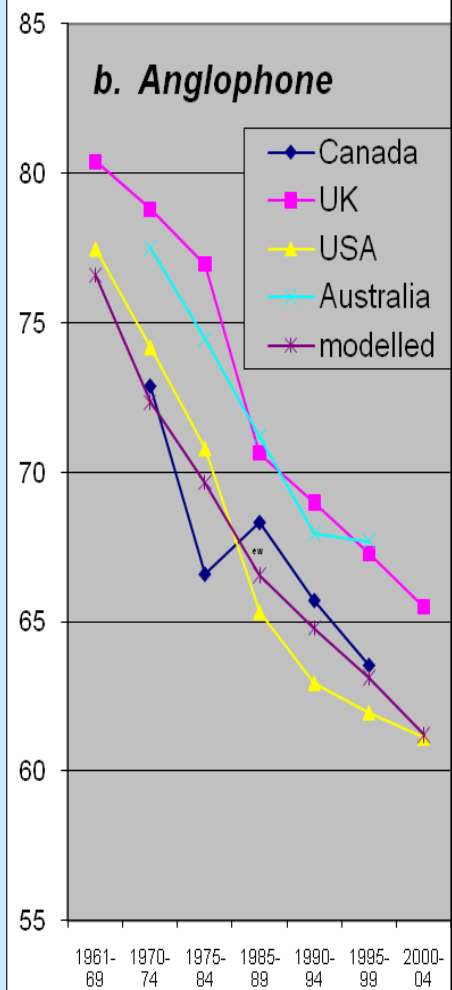
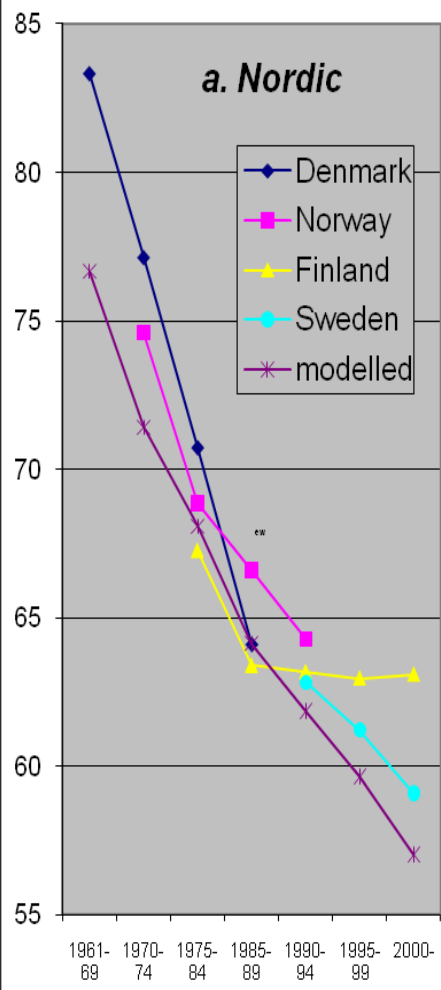
Welfare Regimes and Gender Ideologies

- **liberal market regimes:**
 - UK, the USA, Canada and Australia
 - *modified breadwinner gender ideology*, women **both** paid work & caring roles
- **social democratic or nordic regimes:**
 - Denmark, Norway, Finland, Sweden
 - *dual earner family model*, high employment rate of both women and men
- **corporatist european regimes:**
 - Netherlands, France, Germany, Austria
 - *weak familist gender ideology*, men primary breadwinners, women carers
- **southern regime:** (later addition to typology)
 - Spain, Italy and Israel
 - *traditional familist gender ideology*, *stronger* emphasis on women's family role

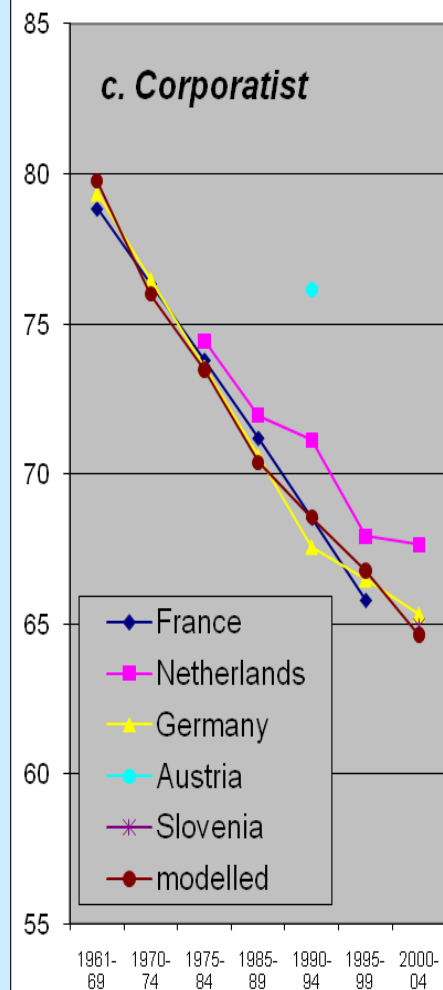
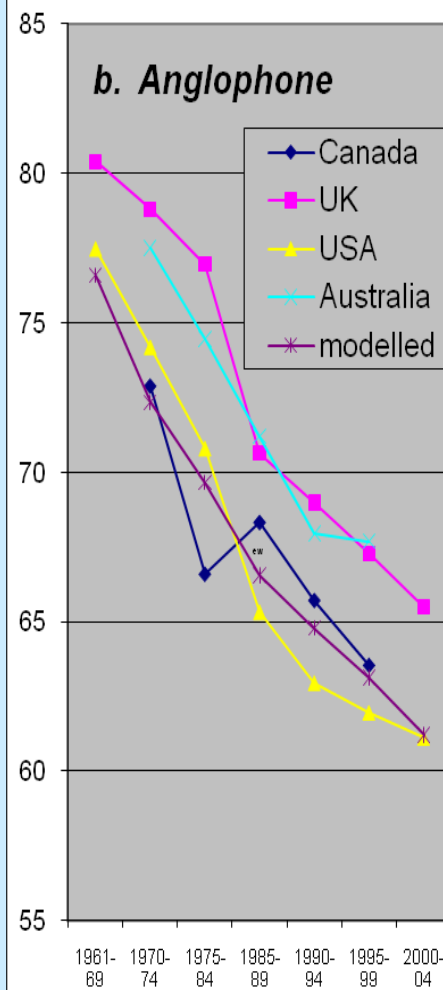
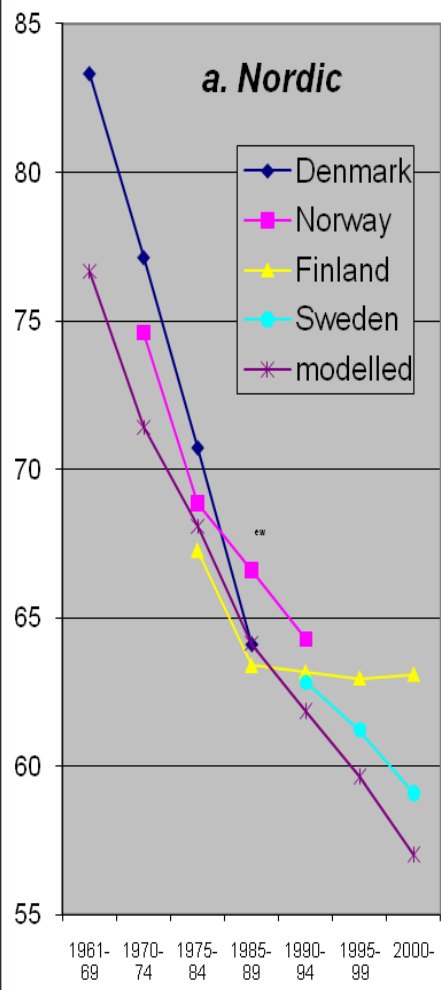
Women's proportion of all unpaid work (men and women aged 20-59)



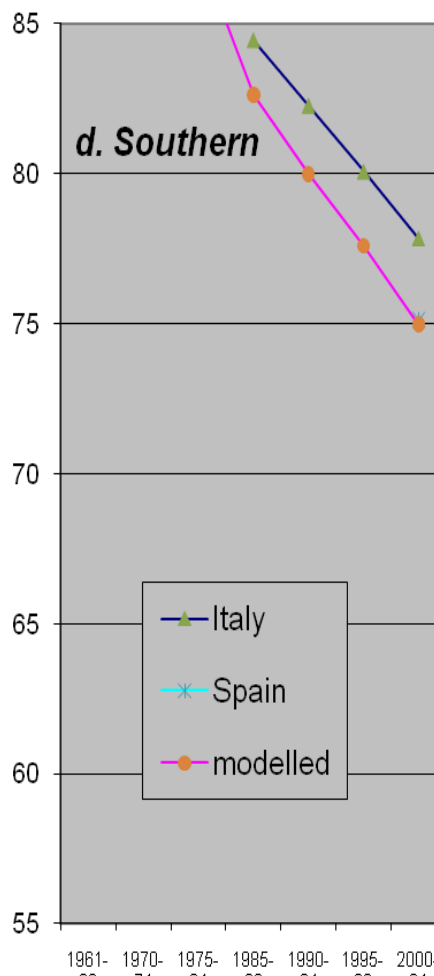
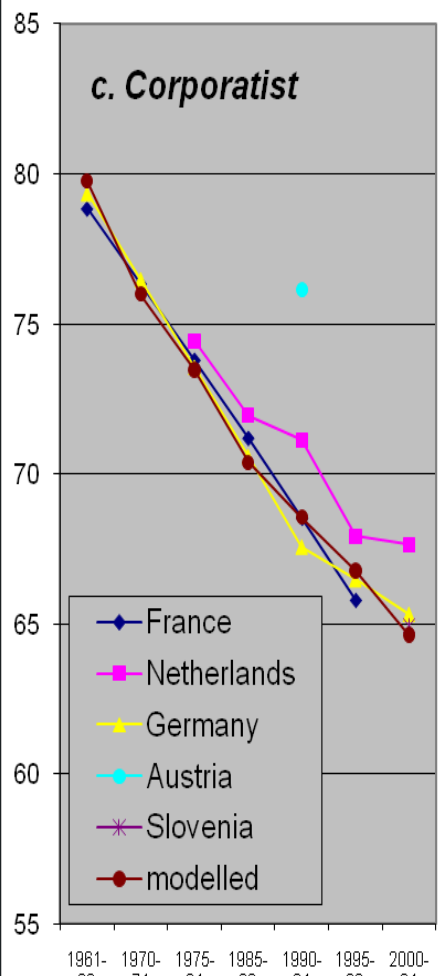
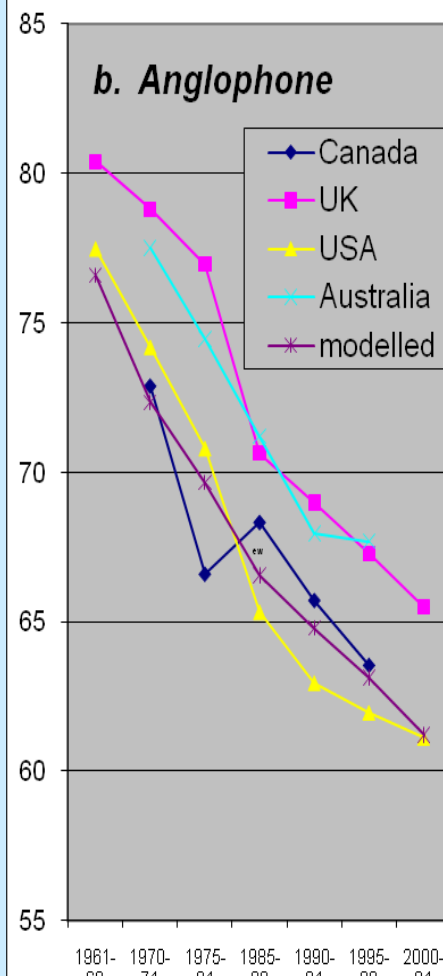
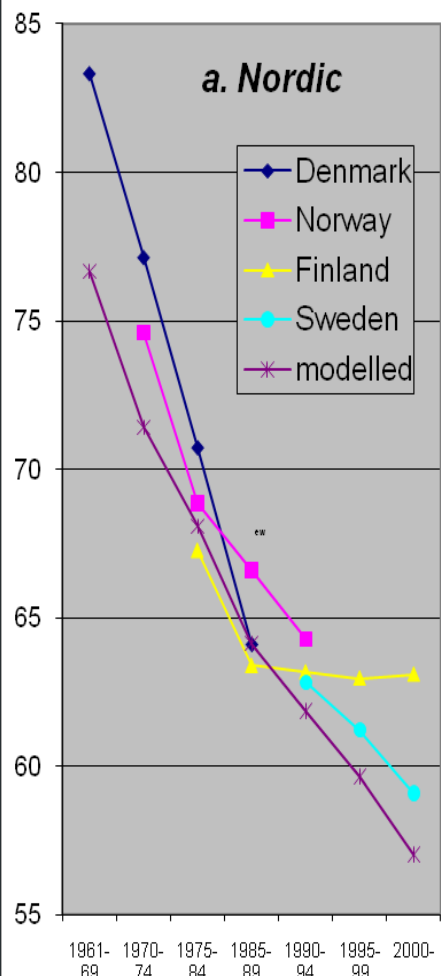
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Women's proportion of all unpaid work (men and women aged 20-59)



So public regulation *does matter*.

- Corporatist, Liberal, Nordic similar in 1960s
- some gender convergence everywhere...
- ...but regime types have different trends.

» **A public policy effect**

(NOTE: Gender equality in total paid+unpaid work.)

Why should we care?

- Because of **gendered differentials in rates of accumulation of “human capital.**
 - Unequal distribution of unpaid work gives husbands advantages in workplace
 - OK while couple stays together...

Why should we care?

- Because of **gendered differentials in rates of accumulation of “human capital.**
 - Unequal distribution of unpaid work gives husbands advantages in workplace
 - OK while couple stays together...
 - ... But 50% of couples split:
 - He leaves with the human capital...
 - ...leaving her with the baby.

3. How much do we enjoy daily life?

- Happiness is a very slippery concept.
 - Eg Easterlin: GNP doesn't bring "happiness"

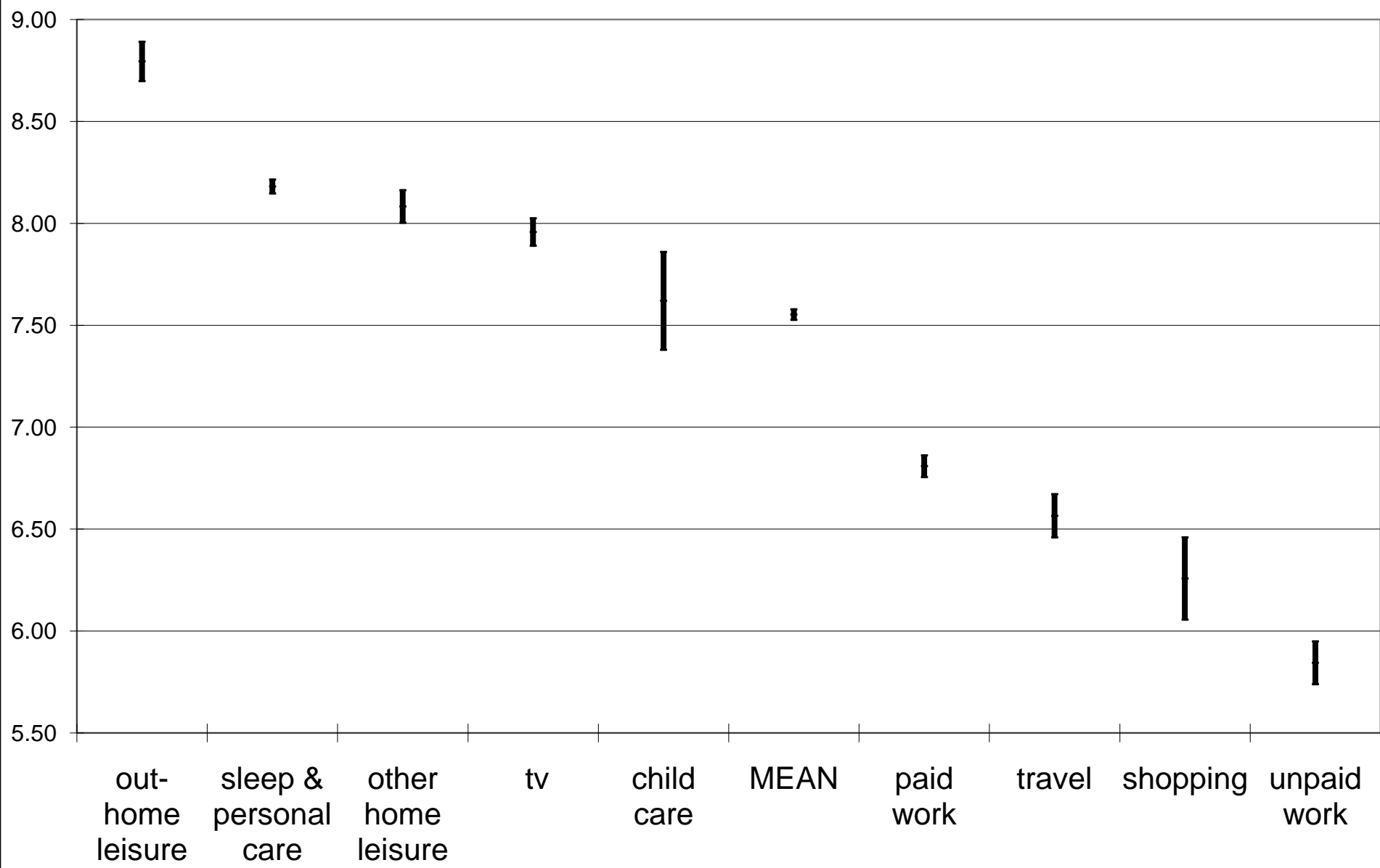
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- Kahneman: "objective happiness"
 - = instantaneous utility (enjoyment)
of current activity**

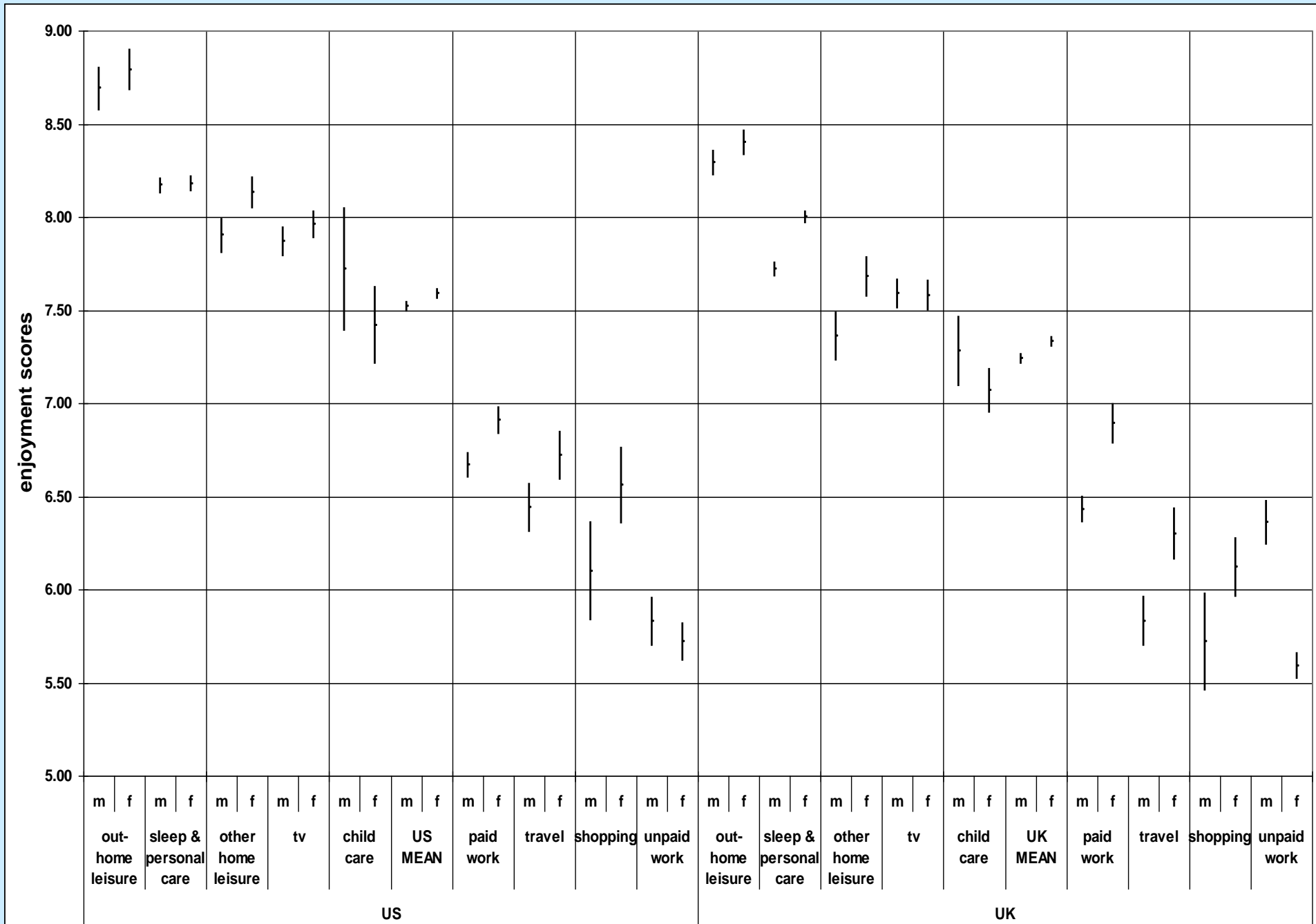
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of current activity**
- We can measure this, with an additional diary column
- UK and USA diary surveys from 1980s.

USA enjoyment scores, 95% confidence intervals



Men's and women's enjoyment of activities



Alternative National Accounts

- GNP: values all output from paid work
- Extended GNP: output from paid+unpaid
- NOTE: both **exclude enjoyment of work**

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- **New Measure:**

Gross National Utility =

sum (mins in each activity*enjoyment of each activity)

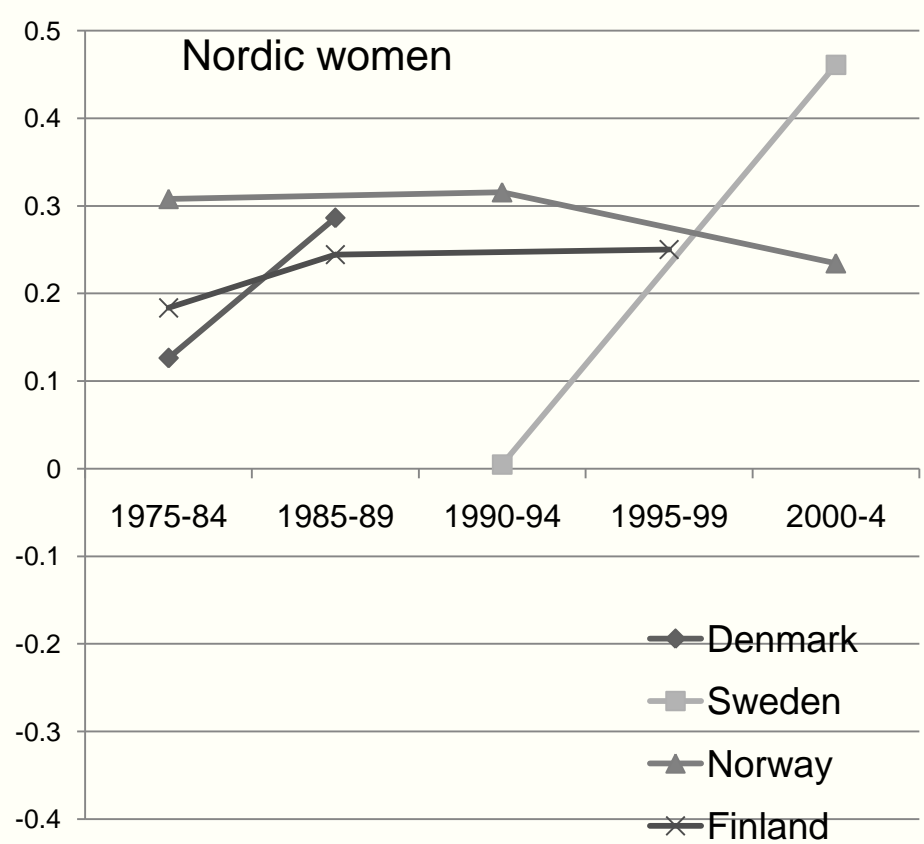
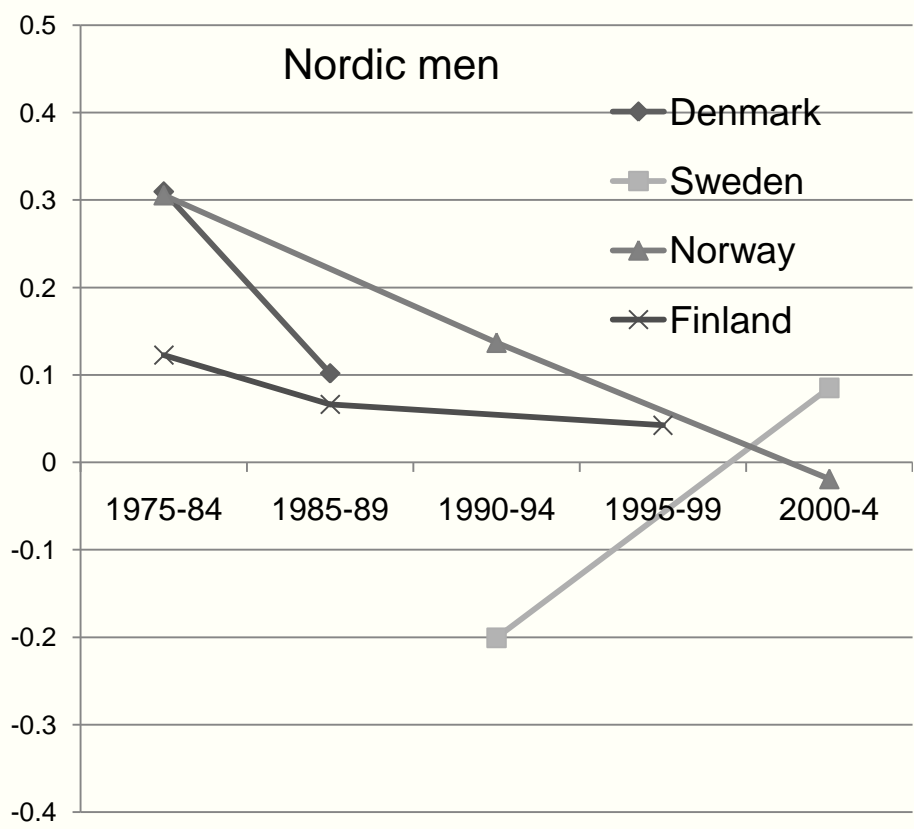
1440

- GNU includes enjoyment of work *and* leisure

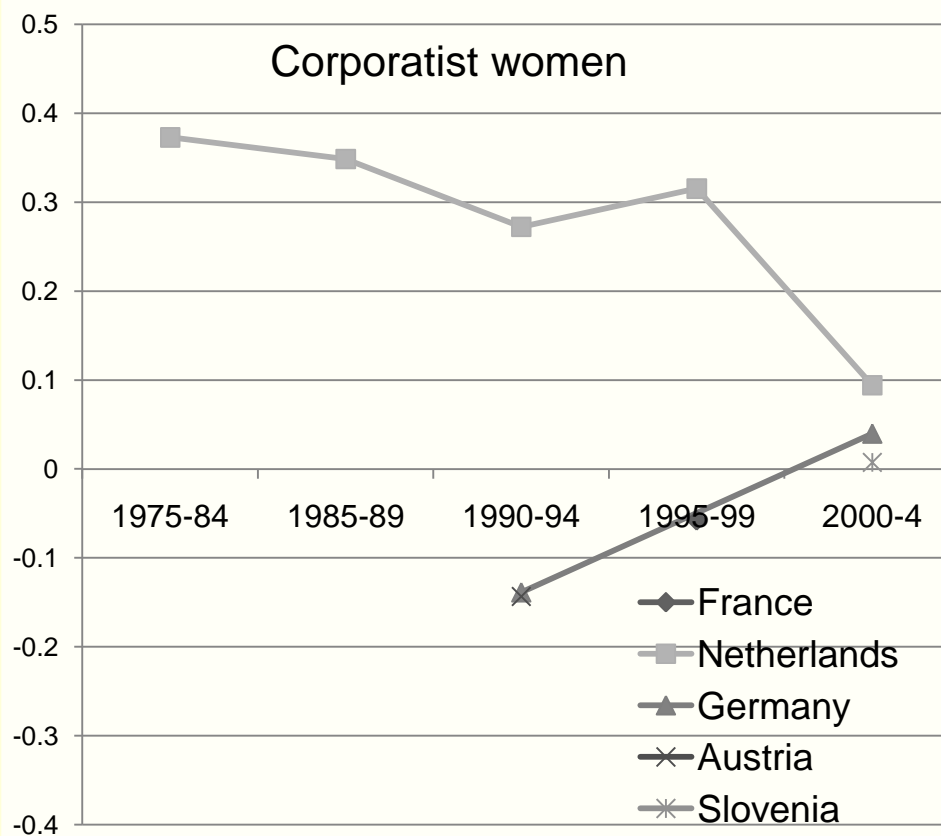
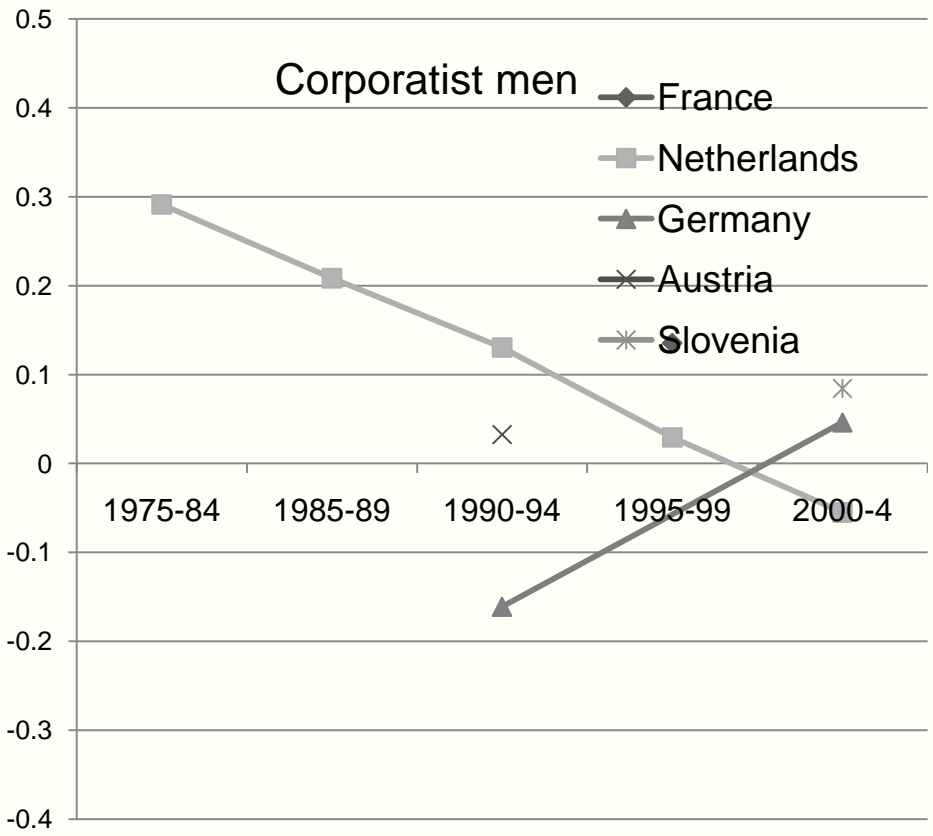
Counterfactual experiment

- Model US&UK 1980s relationship between enjoyment of each activity and individual characteristics + time use patterns.
- Use models to **impute** activity enjoyment scores to other countries and periods.
- Standardise for each sex (mean=0,sd=1)
- GNU = actual time use*imputed enjoyment

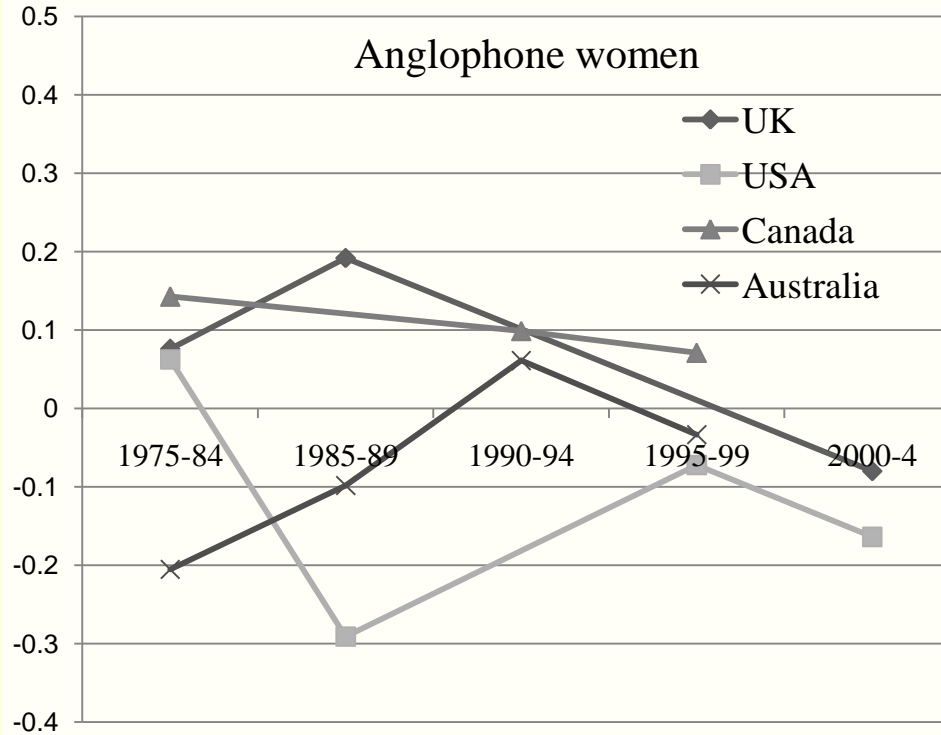
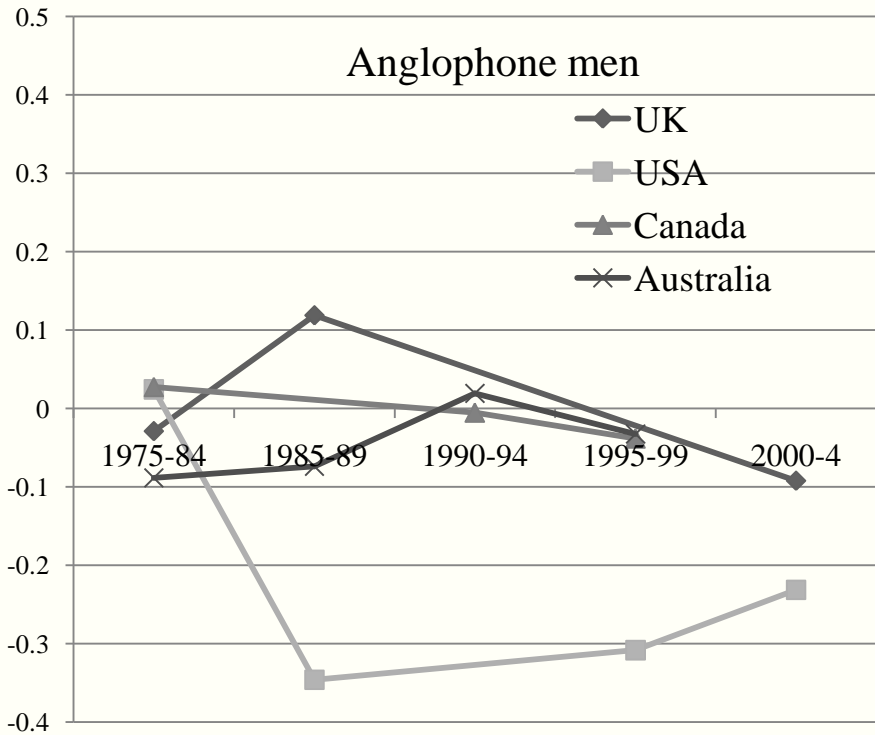
National Time Value Accounts (GNU): Nordic countries



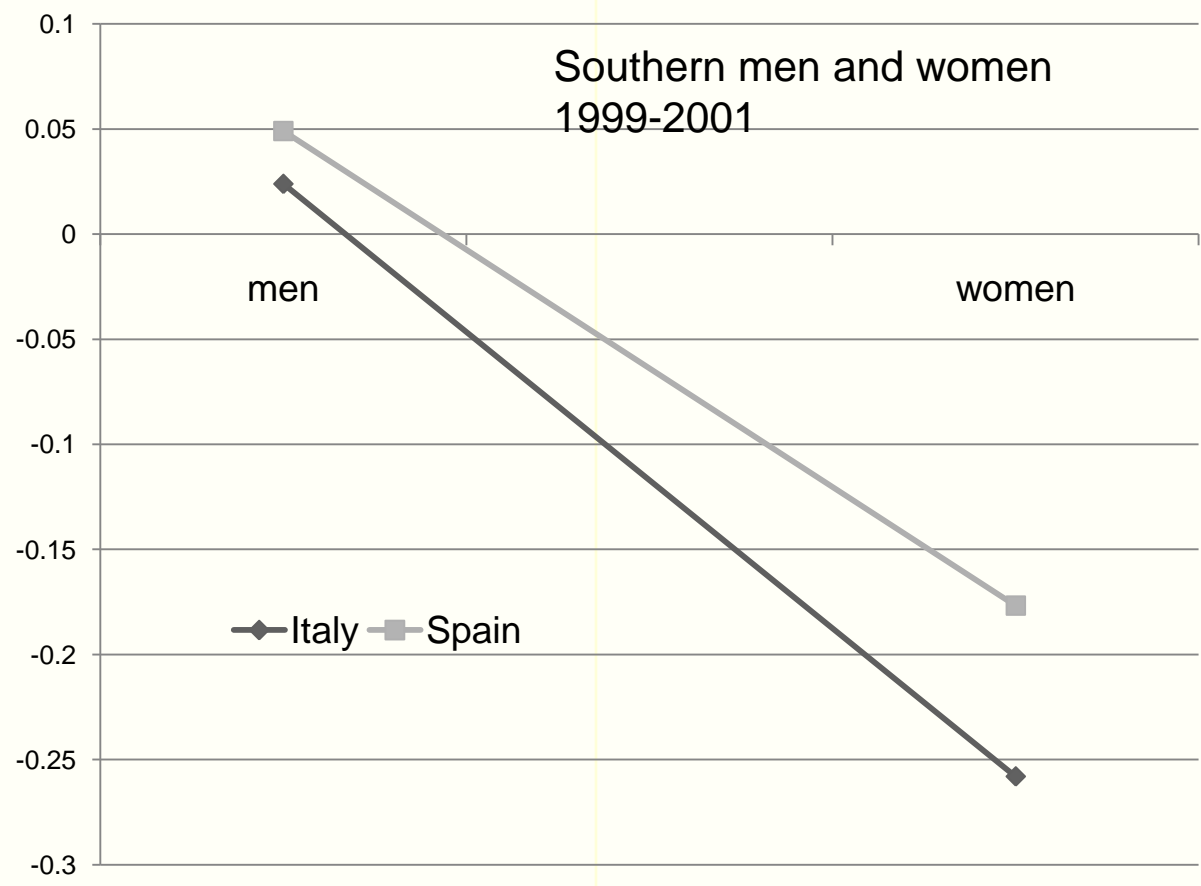
National Time Value Accounts (GNU): Corporatist countries



National Time Value Accounts (GNU): Anglophone countries



National Time Value Accounts (GNU): Southern countries



Different time-use patterns, different evolution of GNU

- **NORDIC:** above the mean GNU: women rising substantially.
- **CORPORATIST:** both sexes converging on the mean.
- **ANGLOPHONE:** both sexes falling below the mean.
- **SOUTHERN:** men above the mean, women well below it.

Explanation?

- Seems to be reasonably straightforward:
 - Growth in total work time in **Anglo** countries...
 - ... shift from paid work to unpaid work.
 - Women in **Southern** countries left with disproportionate share of the unpaid work.
 - Women in the **Nordic** countries have smaller, fairer share of the unpaid work

Lesson for public policy:

- Economic growth *can* reduce “objective happiness”
- Shorter working hours, more (paid employment) childcare support to reduce unpaid work, fairer sharing between men and women **could both** encourage growth **and** increase happiness.

Lots of other messages

- About the **organisation of paid work** (antisocial hours, long and short work-days and work-weeks)
- About the **distribution of leisure** (work-rich & time-poor vs time-rich & work poor)
- About **healthy life practices**: eating sleeping and exercise distributions.
- Eg: **who takes least purposive exercise?**

Time spent in active sports and exercise (decile percentages)

	managers	medical & education prof'ns	other prof'ns	clerical	assembly, security, sales	farming, fishery & forestry	no occup	N
bottom decile	11	20	4	12	11		3	1699
2	10	16	4	13	11		6	1699
3	9	12	6	13	11	1	8	1698
4	9	10	7	13	11	2	10	1698
5	8	9	9	11	10	2	13	1700
6	9	7	10	10	10	6	13	1698
7	9	7	11	8	11	7	14	1699
8	11	7	14	6	10	11	13	1699
9	12	7	15	7	8	31	11	1697
top decile	12	5	20	7	7	41	10	1699
column %	100	100	100	100	100	100	100	
	2972	1151	2218	3123	5710	183	1631	16988

The sting in the tail

- All UK results from 2000-2001
- There has been no proper time-use study since then.
- Majority of other EU countries have produced new large time diary surveys between 2009-2011.

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2. Public policy *can* make a difference to this
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