



# Introduction to ATUS Wellbeing Module

**Kimberly Fisher**  
**IATUR Secretary**  
**Centre for Time Use Research**  
**University of Oxford, UK**



# Key developers of activity-level emotional well-being?

- Post-diary activity questions - William Michelson, Frank Stafford, F Thomas Juster
- ESM – Mihaly Csikszentmihalyi, Jiri Zuzanek
- Time Diary – John Robinson, Jonathan Gershuny
- Day Reconstruction Method - Alan Krueger, Daniel Kahneman
- Promoted by OECD and UNECE



# Why care about affect / emotional well-being?

- Association between daily experiences (what you do in what order, where events happen and conditions in those places, who else is present) and how people feel
- Measuring emotional responses to behaviour patterns in contexts enable us to compare comparable measures across time
- Permits study of whether changing specific behaviours make people happier overall



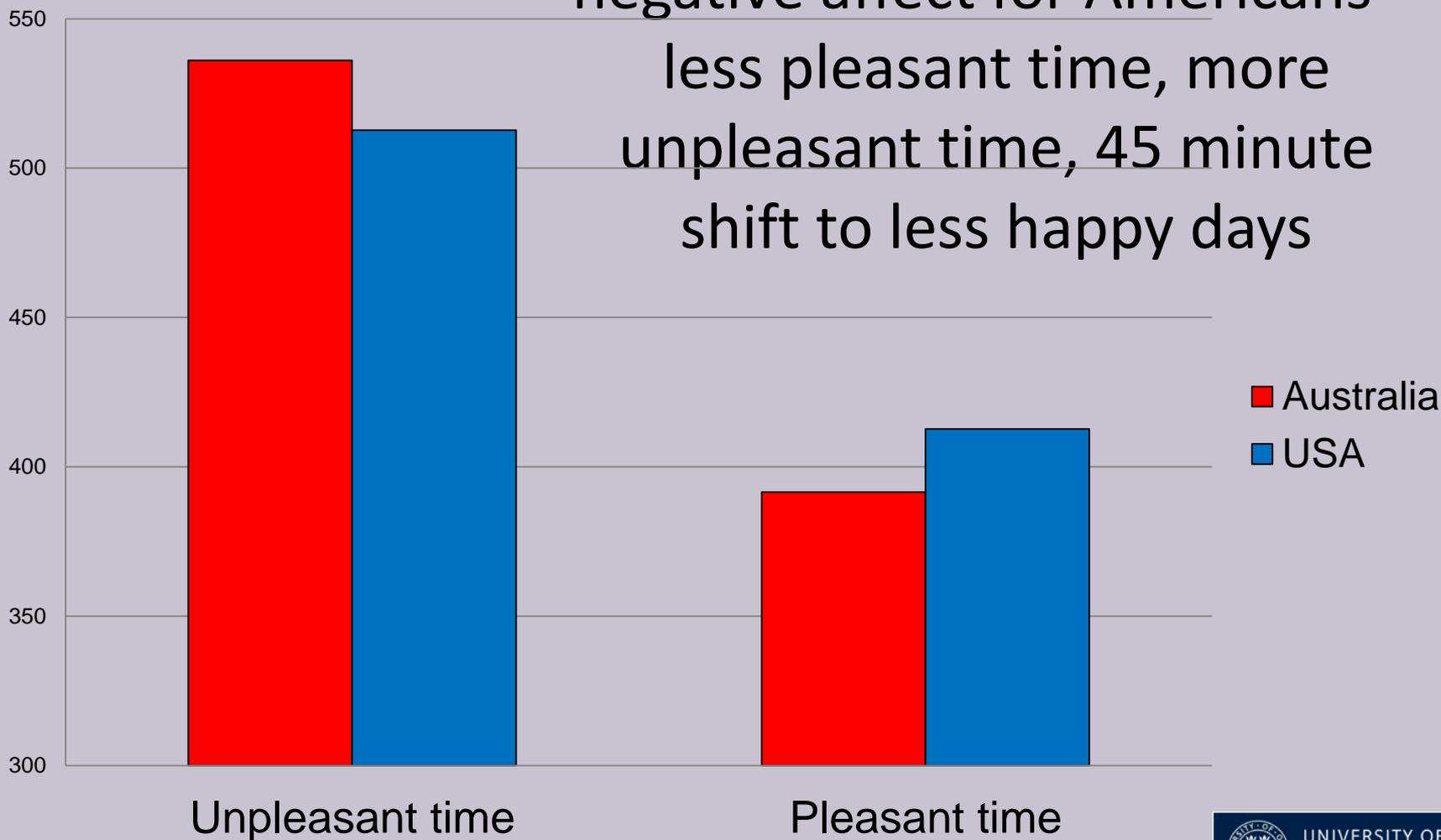
# Why care about affect / emotional well-being?

- Basis for understanding the components of changes in daily emotional well-being
- Basis for computing national well-being scores – a companion measure to GDP (money does not always make people happier)
- Provides natural experiment options – can overlay activity well-being scores of one country on the patterns of another country to see if people would be happier living like others



Work with  
Roger Patulny

Shifting to Australian lifestyles  
would lead to an overall  
negative affect for Americans –  
less pleasant time, more  
unpleasant time, 45 minute  
shift to less happy days





# American's Potential Affect Changes By Activities

- **Gain** more **pleasant** personal care time
- **Gain** more **unpleasant** housework time
- **Gain** more **unpleasant** TV time alone
- Men **gain unpleasant** commuting
- **Lose pleasant** social time with friends and associates doing in-home leisure
- **Lose unpleasant** paid work time





# Modes of collecting affect data in time use diaries

- Matching values collected by ESM surveys
- Collecting questions about activities at the end of the diary (USA 1975-76, Canadian surveys)
- Asking for a rating across one or two dimensions of all episodes in the diary (USA 1985; UK 1986, 2011, 2014-2015; France 2009-10)
- Asking a rating across 3 moments during the diary day (USA - PATS 2006)
- Asking a rating across 3 episodes during the diary day (ATUS)



# American's Use of Time 1975-76

- Rate 22 activities on 0 (dislike a great deal) to 10 (enjoy a great deal) scale
- How much do you enjoy:
  - 1) Cleaning the house;
  - 2) Cooking;
  - 3) Repairs around the house;
  - 4) Making things for the house;
  - 5) Gardening;
  - 6) Grocery shopping;
  - 7) Other shopping;
  - 8) Your job;
  - 9) Looking after your children;
  - 10) Playing with your children;
  - 11) Talking with your children;
  - 12) Taking children places;
  - 13) Talking with your friends;
  - 14) Entertaining at home;
  - 15) Going to church;
  - 16) Volunteering;
  - 17) Watching TV;
  - 18) Reading papers;
  - 19) Reading books or magazines;
  - 20) Playing sports or exercising;
  - 21) At cinema, live sport or event;
  - 22) Trips and outings



# More Recent American Time Use Survey Affect Questions

- American's Use of Time 1985 – for all episodes in the time diary: how much did you enjoy this activity, scale of 0 (dislike a great deal) to 10 (like a great deal) – the recent French & UK surveys use a 7 point scale
- 2006 PATS; 2010 ATUS; 2012 ATUS - 7 point scale
  - 2 positive questions during this time: 1) how happy; 2) how meaningful
  - 4 negative questions during this time: 1) how tired; 2) how stressed; 3) how sad; 4) how much pain



# ATUS diary with affect questions

Time	Main Activity	Where	Who with	Happy	Sad	Stressed	U-index
4am to 7	Sleeping	Home	Partner				
7 to 7.30	Showering	Home	Alone	4	2	2	0
7.30 to 8am	Eating breakfast	Home	Partner				
8 to 9am	Commuting	Train	Strangers				
9am to 12 midday	Working	At work	Colleague				
12 to 1	Eating lunch	At work	Alone	5	1	1	0
1 to 5 pm	Working	At work	Colleague	3	2	4	1
5 to 6.30pm	Drinking socialising	Pub	Friends				
6.30 to 7pm	Cooking	Home	Partner				
7 to 7.30pm	Eating dinner	Home	Partner				
7.30 to 9pm	Watching TV	Home	Partner				
9 to 9.30	Reading	Home	Partner				
9.30 to 4AM	Sleeping	Home	Partner				



# Comparative Advantages

- Asking 1 to 2 questions of all episodes
  - Get a complete day emotion score for each diarist
  - Can see if un/happiness in one episode influences emotion in the next episode
  - Get more observations from more people for each activity and context
- Asking 6 questions of part of the diary
  - Pick up more dimensions of emotion
  - Calculate an index (U index of unhappiness) – degree to which unhappy answers outweigh happy answers



# Comparative Advantages

- Asking 6 questions of part of the diary
  - Why a U-index and not an H-index?
  - More important for policy to reduce unhappiness than promote happiness
  - More variation and intensity when people are not happy than when they are happy
- Asking 6 questions 15 minute moments
  - Capture variations emotion variation across an episode – more important the longer the episode



# Contested areas

- How soon after the event do you have to ask the emotion question for meaningful answers?
- How many questions should we ask?
- What are the right affect questions to ask?
- What is the right scale (5, 6, 7, 8, 10 points)?
- Does adding affect require us to lose another feature of the diary to maintain response rates?
- ATUS response rates: 2003: 57.8%; 2004: 57.3%; 2005: 56.6%; 2006: 55.1%; 2007: 52.5%; 2008: 54.6%; 2009: 56.6%; **2010: 56.9%**; 2011: 54.6%; **2012: 53.2%**



# Points to note on ATUS module

- Sleep, personal care, can't remember & none of your business activities not selected for asking the ATUS affect questions (a contrast with the PATS, ESM and all activity surveys)
- Coding error means that in 2010 and 2012, the last activity in the diary under-selected, even if an eligible activity for selection
- Make sure you use the May 2014 or later download to make use of weights adjusting for this error



# ATUS well-being additional features

- Health questions – general health and how tired the respondent felt when they awoke on the diary day – similar questions only are available with the well-being module (2010; 2012) and the eating and health module (2006-2008)
- The module includes adjusted weights relating to the affect questions – you can analyse activities for which these questions were asked using these weights



# ATUS well-being module additional possibilities

- Some people make matching tables using the well-being scores for those activities for which data are collected and then mapping median or mean scores to other activities for which affect data were not collected – separately applying calculations for different demographic groups and adjusting for season
- This is not something you can do with the TUS-X system



# ATUS well-being module additional possibilities

- Some people make matching tables using the well-being scores for those activities for which data are collected and then mapping median or mean scores to other activities for which affect data were not collected – separately applying calculations for different demographic groups and adjusting for season
- This is not something you can do with the TUS-X system



# ATUS well-being module data issues

- The original ATUS files operate on different levels
  - Household information
  - Diarist level information
  - Person level information about other people in the diarist's household
  - Activity level information
  - Emotion level information for some activities
- Making extracts which deal with these different levels of data is something you can do with the TUX-X extract system