
Happiness, Time-Use and Public Policy

Ronnie Schöb
Freie Universität Berlin

Lecture course at CES
April 20, 2010

Course outline

1. Today: Choices and Happiness
2. Thursday April 22: Dissatisfied with Life, but Having a Good Day: Time-Use and Well-Being of the Unemployed
3. Tuesday April 27: Happiness and Public Policy

Course outline

1. Why I am interested in happiness research
2. What problems do I have with happiness research and a first attempt to deal with them
3. What a public economist can make out of happiness research

From happiness to utility

Happiness is the meaning and the purpose of life, the whole aim and end of human existence.

Aristotle

From happiness to utility

It is better to be a human being dissatisfied than a pig satisfied; better to be Socrates dissatisfied than a fool satisfied.

John Stuart Mill

From happiness to utility

Two concepts of happiness

1. The objectivist's view

- meaningful life

2. Subjective view

- pure hedonism: flow of utility
- judgments about the good/bad elements of life.

Experienced utility

1. Utility as flow of experienced utility

- utilitarian approach: utility is the individual's objective function and can be measured
- Edgeworth 1881: hedonimeter
 - ...let there be granted to the science of pleasure what is granted to the science of energy; to imagine an ideally perfect instrument, a psychophysical machine, continually registering the height of pleasure experienced by an individual.

Experienced utility

Kahneman et al. (QJE 1997)

- Experienced utility as the integral over momentary utilities

$$u(A) = \int_{t=0}^{T(A)} u^A(t) dt > \int_{t=0}^{T(B)} u^B(t) dt = u(B)$$

⇒ A makes you happier than B

Preferences

2. Utility as revealed preferences

- Measuring experiences is impossible
- Choices give us all information needed

$$\text{Choice of } A \Rightarrow A \succ B \Rightarrow u(A) > u(B)$$

⇒ Utility as “wantability” (Fisher)

Experienced utility and preferences

It does not matter which concept we apply

1. if choices are observable
2. if choices are not choice-set dependent
3. if experienced utility is correctly anticipated

1. Non-market goods

Public goods and externalities

- Theoretically: Samuelson rule
- But how do we measure (marginal) utilities?
- Theoretically: Clarke-Groves
- Practically: auxiliary means
 - ⇒ hedonic prices
 - ⇒ contingent valuation method

Contingent valuation method

Embedding effect (Kahneman and Knetsch JEEM 1992)

Mean Willingness to Pay in US \$	Group 1 (<i>n</i> = 66)	Group 2 (<i>n</i> = 78)	Group 3 (<i>n</i> = 74)
Environmental Services	135.91	---	---
Improve disaster preparedness	29.06	151.60	---
Improve rescue equipment, personnel	14.12	74.65	122.64

Side step

Kaldor-Hicks compensation criterion

- how do we know the (theoretical) compensation the winner has to pay the loser of a policy measure?

2. Choice-set dependent utility

Kőszegi and Rabin (JPubE 2008)

- Preference order

$$u(a | \{a\}) > u(c | \{c, a\}) > u(a | \{c, a\}).$$

- Normally: self-binding meta choice
- Objections
 - dislike for showing weakness
 - Situations where choices are possible but not self-binding meta-choices

2. Choice-set dependent utility

Experiments

- external validity

Oreopoulos (JPubE 2007)

- Pupil who had to go to school for one additional year showed long-lasting increases in well-being.

Knabe et al. (work in progress 2010)

- Unemployed people forced into a workfare measure report higher well-being than unemployed people who did not want to participate.

3.1 False memories

Decisions are based on remembered utility

$$u^{\text{remembered}}(A) > u^{\text{remembered}}(B) \Rightarrow A \succ B \Rightarrow \text{Choose } A$$

3.1 False memories

**When more pain is preferred to less
(Kahneman et al., Psychological Science 1993)**

- Short trial: subjects immersed one hand in water at 14 °C for 60 s
 - Long trial: 30 s longer as the temperature was gradually raised to still painful 15 °C.
- ⇒ Most subjects preferred to repeat the long trial, which they reported to have been less painful

Duration neglect

Experienced utility

$$0 > u^{\text{experienced}}(S) = \int_{t=0}^{60\text{sec}} u(t)dt > u^{\text{experienced}}(L) = \int_{t=0}^{90\text{sec}} u(t)dt$$

Remembered utility: peak-end heuristic

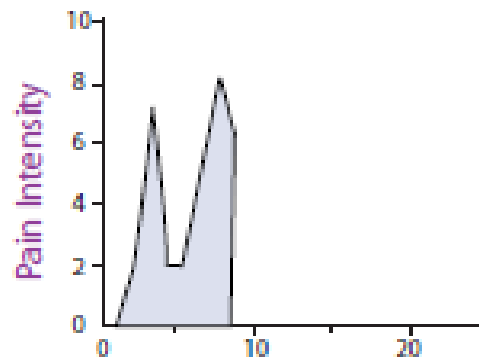
$$u^{\text{remembered}}(L) = 0.5u^{\text{peak}}(L) + 0.5u^{\text{end}}(L)$$

>

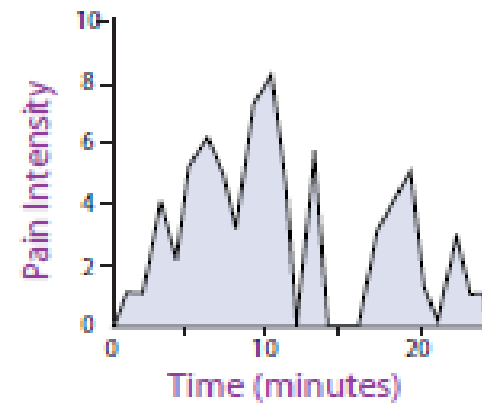
$$u^{\text{remembered}}(S) = 0.5u^{\text{peak}}(S) + 0.5u^{\text{end}}(S)$$

Duration neglect

Colonoscopy



Patient A

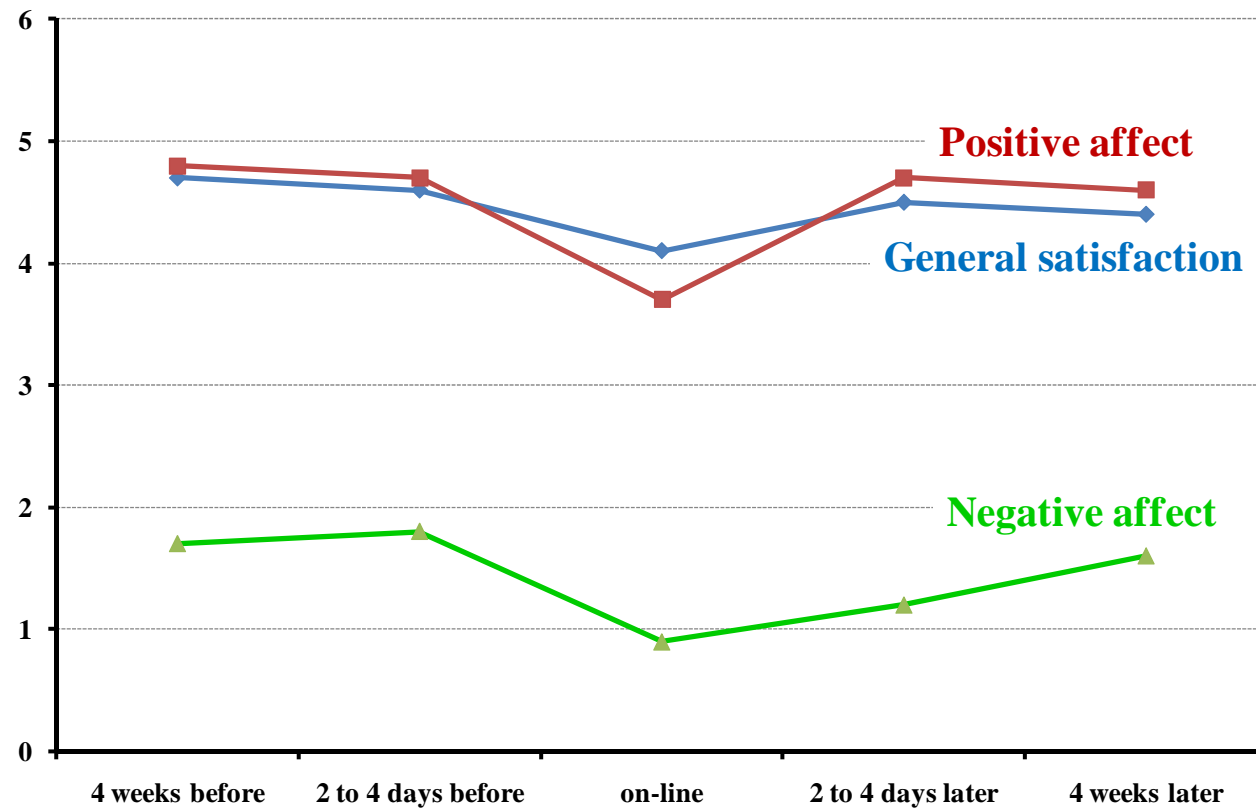


Patient B

- Patients of type B reported less pain

Intensity bias

Spring break: expected, experienced and remembered utilities (Wirtz et al. Psychological Science 2003)



Intensity bias

The human race is far too stupid to be deterred from tourism by a mere several million years of bad experiences

Barry 1991

3.2 Adaptation

Two types of adaptation

■ hedonic adaptation

- the intensity of experiences diminish over time
- people become used to changing life circumstances

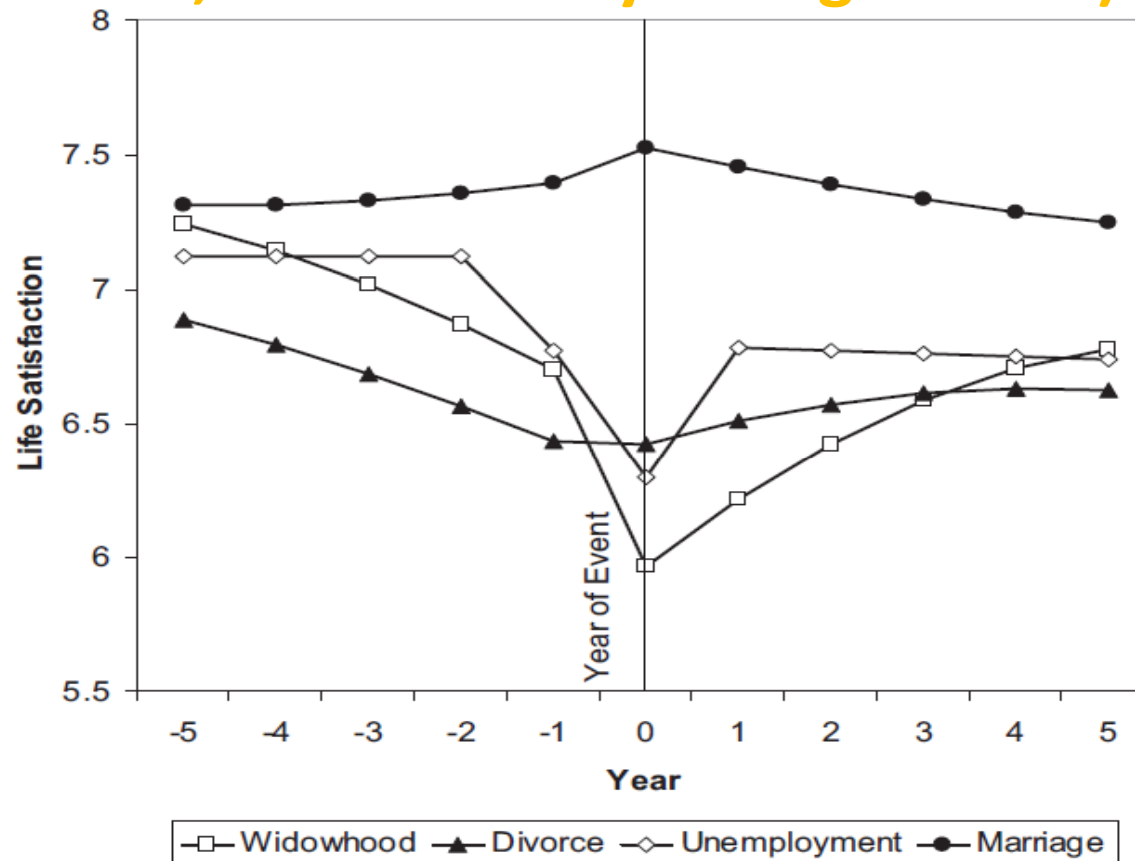
$$u(x_t - AL_t) \text{ with e.g. } AL_t = \gamma x_{t-1}$$

■ aspiration adaptation

- people gradually adjust their aspirations to the utility that they normally experience even if they continue to experience higher utility

3.2 Adaptation

We adapt to many life circumstances
(Diener et al., American Psychologist 2006)



3.2 Adaptation

- Adaptation is no problem as long as it is correctly anticipated

3.3 Biased anticipation

Anticipation of the Endowment Effect I (Loewenstein and Adler EJ 1995)

Group/condition	Number of Subjects	Prediction of valuation	Actual valuation
Carnegie Mellon University			
Prediction	14	3.73 \$ (0.41)	5.40 \$ (0.65)
No prediction	13	---	6.46 (0.54)
University of Pittsburgh			
Prediction	22	3.27 \$ (0.41)	4.56 \$ (0.59)
No prediction	17	---	4.98 \$ (0.53)

3.3 Biased anticipation

Loewenstein und Adler (EJ 1995)

People seem to be unwittingly trapped by their choices; they make choices with an unrealistic sense of their reversibility.

3.3 Biased anticipation

Anticipation of the Endowment Effect II (Van Boven, Dunning und Loewenstein, JEBO 2000)

	Minimum/ maximum price		Price estimated by the other group	
	(1)	(2)	(1)	(2)
Owners	5.40 \$	6.37 \$	4.06 \$	4.39 \$
Non-owners	1.56 \$	1.85 \$	2.93 \$	3.39 \$

3.3 Biased Anticipation

Anticipation of the Endowment Effect III (Van Boven, Dunning und Loewenstein, JEBO 2000)

- ❑ A buyer's agent receives 10\$ minus the sales price if the offered price exceeds the demanded price
- ❑ Profit-maximizing strategy: 2.15 \$
- ❑ Actual profit: 0.75\$
- ❑ Buyer's agents who also possessed a mug did significantly better
- ❑ no learning effects

3.3 Biased Anticipation

Anticipation of the Endowment Effect III (Van Boven, Dunning und Loewenstein, JEBO 2000)

One buyer's agent was so upset when she found out that her offer was rejected that she shouted insulting profanities at the mug owners, hollering that she had been cheated out of her money.

3.3 Biased anticipation

Affective Forecasts and Experiences of Lovers I (Gilbert et al., JPersSocPsy 1998)

	Experiences			Forecasts (Loners)
	Young lovers	Old lovers	Loners	
<i>Mean</i>	5.91 (1.12)	5.71 (1.02)	5.17 (1.31)	5.79 (1.19)
<i>n</i>	57	141	334	334

3.3 Biased anticipation

Affective Forecasts and Experiences of Lovers II (Gilbert et al., JPersSocPsy 1998)

	Experiences			Forecasts (Luckies)
	Young leftovers	Old leftovers	Luckies	
Mean	5.42 (1.16)	5.46 (1.26)	5.27 (1.25)	3.89 (1.56)
n	36	302	194	194

⇒ Asymmetry in the anticipation of positive and negative adaptation

3.3 Biased anticipation

Tenure and Happiness (Gilbert et al., JPersSocPsy 1998)

Happiness	Forecast		Experience	
	Positive	Negative	Positive	Negative
Recent happiness:				
Mean	5.90 (1.09)	3.42 (1.37)	5.24 (1.39)	4.71 (1.98)
n	33	33	25	7
Ancient happiness:				
Mean	5.65 (1.35)	4.97 (1.81)	5.82 (0.91)	5.23 (1.74)
n	33	33	22	13

- ⇒ Wrong short-run forecasts: durability bias
- ⇒ Asymmetry in the anticipation of positive and negative adaptation

3.3 Biased anticipation

Easterlin (JEBO 1995) paradox

- Richer people are happier than poorer people
- Although people become richer over time, reported well-being does not increase

Tentative policy recommendation (Layard EJ 2006)

- Relative comparison matters: externality
- Comparison with former income matters: internality

⇒ progressive income taxation

3.3 Biased anticipation

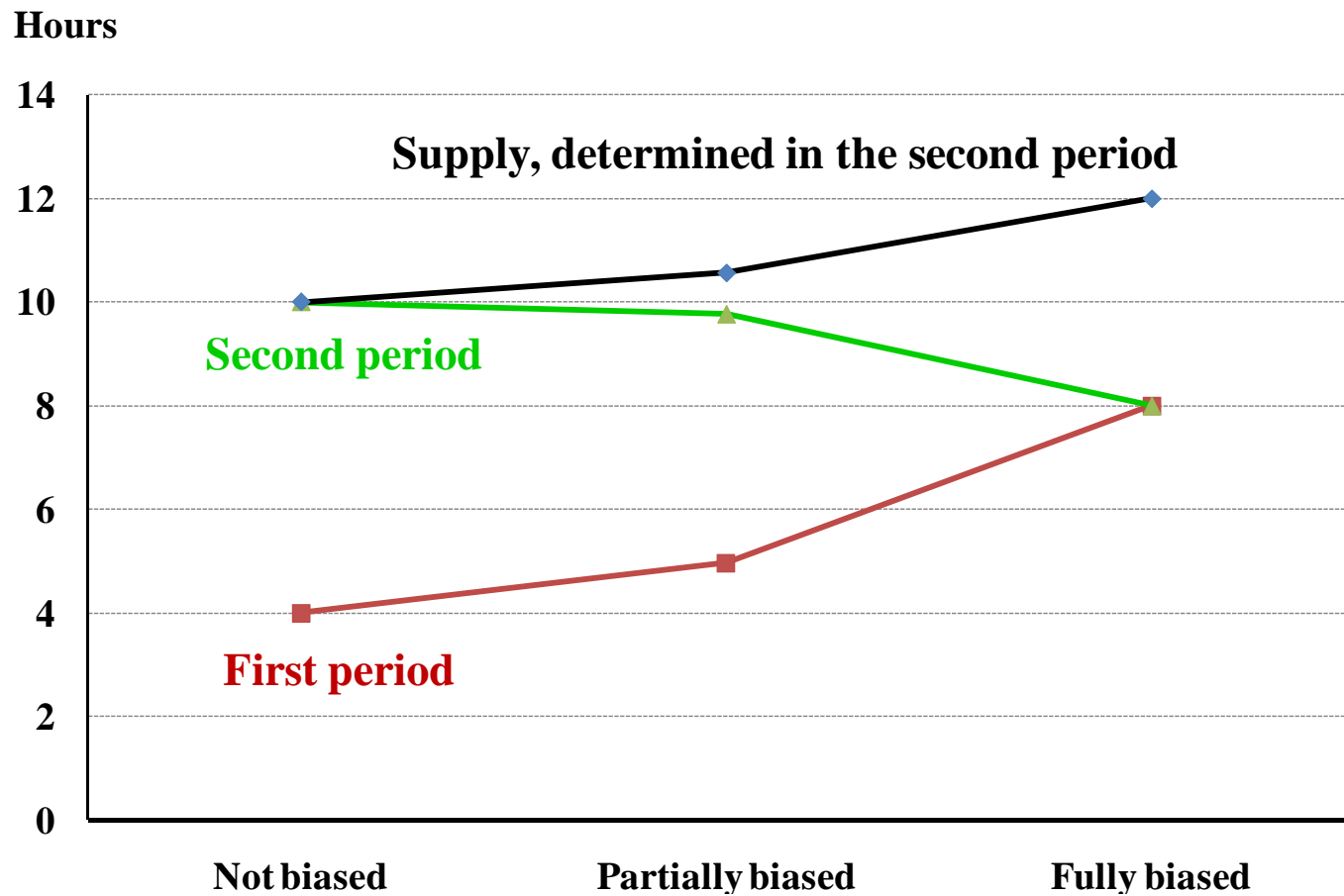
A simple model

- 2 period consumption and labour supply
- no savings
- Adaptation to a reference level $s_i = \gamma l_{i-1}$
- Anticipation bias α

$$\begin{aligned}\max u &= \ln(c_1) + \ln(1-l_1) + \alpha \ln(c_2 - s_1) + (1-\alpha) \ln(c_2 - s_2) + \ln(1-l_2) \\ &= \ln(l_1) + \ln(1-l_1) + \alpha \ln(l_2) + (1-\alpha) \ln(l_2 - \gamma l_1) + \ln(1-l_2)\end{aligned}$$

3.3 Biased anticipation

A simple model



3.4 Focusing illusion

Kahneman et al. (Science 2006)

Nothing in life is quite as important as you think it is while you are thinking about it.

Schkade and Kahneman (Psychological Science 1998)

- Students at in California and Midwest both believed that living in California is better
 - Actual life satisfaction does not show any difference
- ⇒ When thinking about where to live, the focus is on climate
-

3.4 Focusing illusion

Living in a student dormitory

(Wilson and Gibson, *AdvExpSocPsy* 2003)

	Predicted	Actual
Undesirable houses	3.43 (1.50)	5.37 (1.16)
Desirable houses	5.96 (0.85)	5.45 (0.92)

Summary

1. Observable choices may not give us enough information about experienced utility.
2. Welfare analysis and public policy crucially depends on information about individual utilities
 - ⇒ Quest for additional information
 - ⇒ Why not simply asking people about their well-being
 - ⇒ alternative measures of happiness