

Whose Preferences Should We Use?

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Evaluating Outcomes

- Preference assessments are essential for evaluating outcomes in many policy analyses and planning applications
 - **Risk analysis**
 - **Cost-benefit analysis**
 - **Program evaluation**
- Which outcome evaluations should we use?
 - **Different temporal perspectives**
 - **Participants vs observers**



The Three Selves: Whose evaluations to use?

The
Wanting
Self

Choice
Forecasting
Anticipation

Before

The
Experiencing
Self

Sensation
Emotion
Reaction

During

The
Remembering
Self

Memory
Regret
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After



Problem:

Outcome evaluations often differ between the three perspectives

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Would you be happier if you were richer?

Yes!

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The Focusing Illusion: Exaggerating differences

(Kahneman, Krueger, Schkade, Schwarz & Stone, 2006, *Science*)

Variable	Group	Percentage of time in a bad mood	
		Actual	Actual difference
Household income	<\$20,000	32.0	12.2
	>\$100,000	19.8	
Woman over 40 years old	Alone	21.4	-1.7
	Married	23.1	
Supervision at work	Definitely close	36.5	17.4
	Definitely not close	19.1	
Fringe benefits	No health insurance	26.6	4.5
	Excellent benefits	22.2	

*** $p < 0.001$.



The Focusing Illusion: Exaggerating differences

(Kahneman, Krueger, Schkade, Schwarz & Stone, 2006, *Science*)

Variable	Group	Percentage of time in a bad mood			
		Actual	Predicted	Actual difference	Predicted difference
Household income	<\$20,000	32.0	57.7	12.2	32.0***
	>\$100,000	19.8	25.7		
Woman over 40 years old	Alone	21.4	41.1	-1.7	13.2***
	Married	23.1	27.9		
Supervision at work	Definitely close	36.5	64.3	17.4	42.1***
	Definitely not close	19.1	22.3		
Fringe benefits	No health insurance	26.6	49.7	4.5	30.5***
	Excellent benefits	22.2	19.2		

*** $p < 0.001$.

Experiencing self

Wanting self



The great source of both the misery and disorders of human life seems to arise from over-rating the difference between one permanent situation and another.

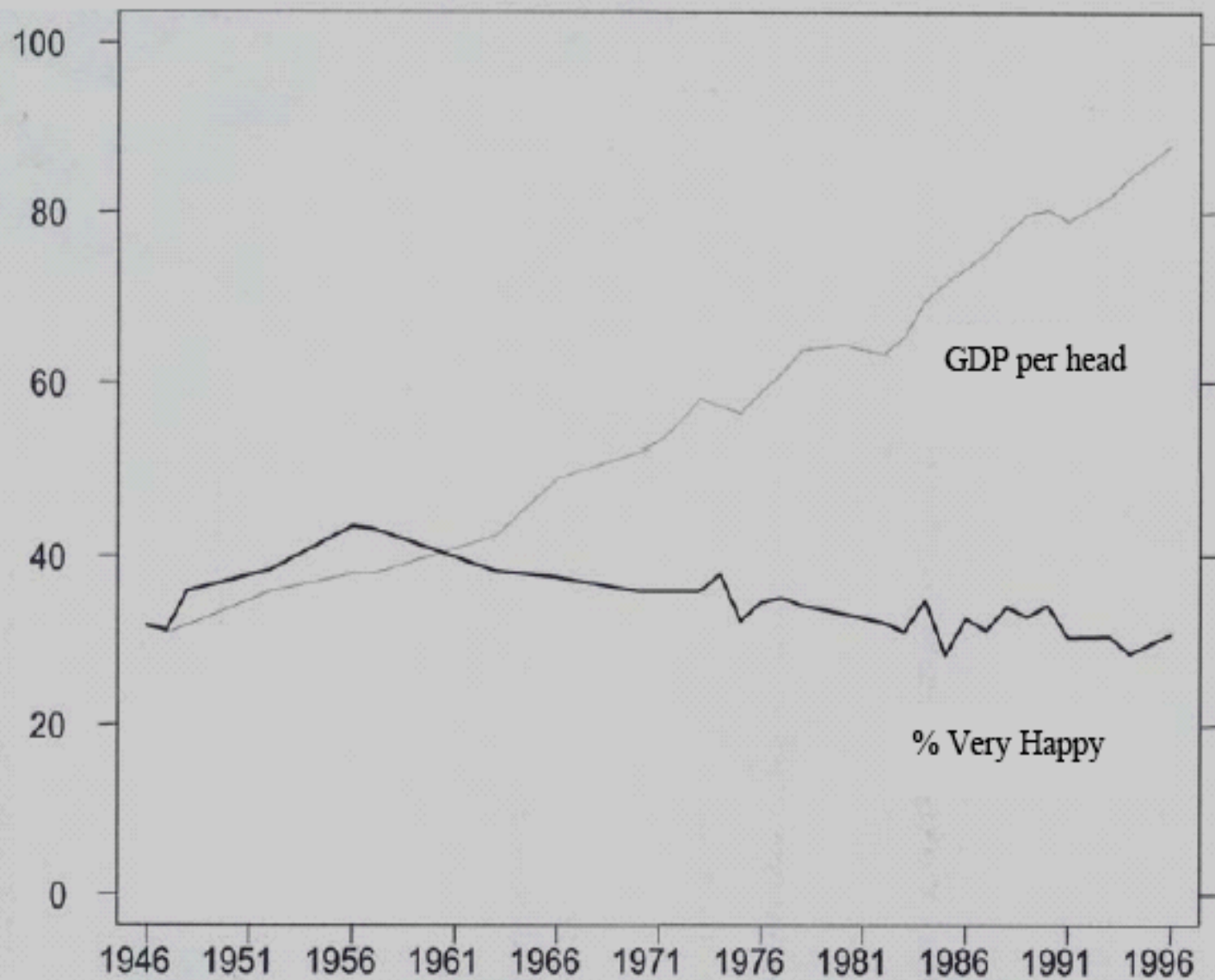
– Adam Smith (1759)



Income and happiness in the USA

% very happy

GDP per head
(\$, 2001 prices)

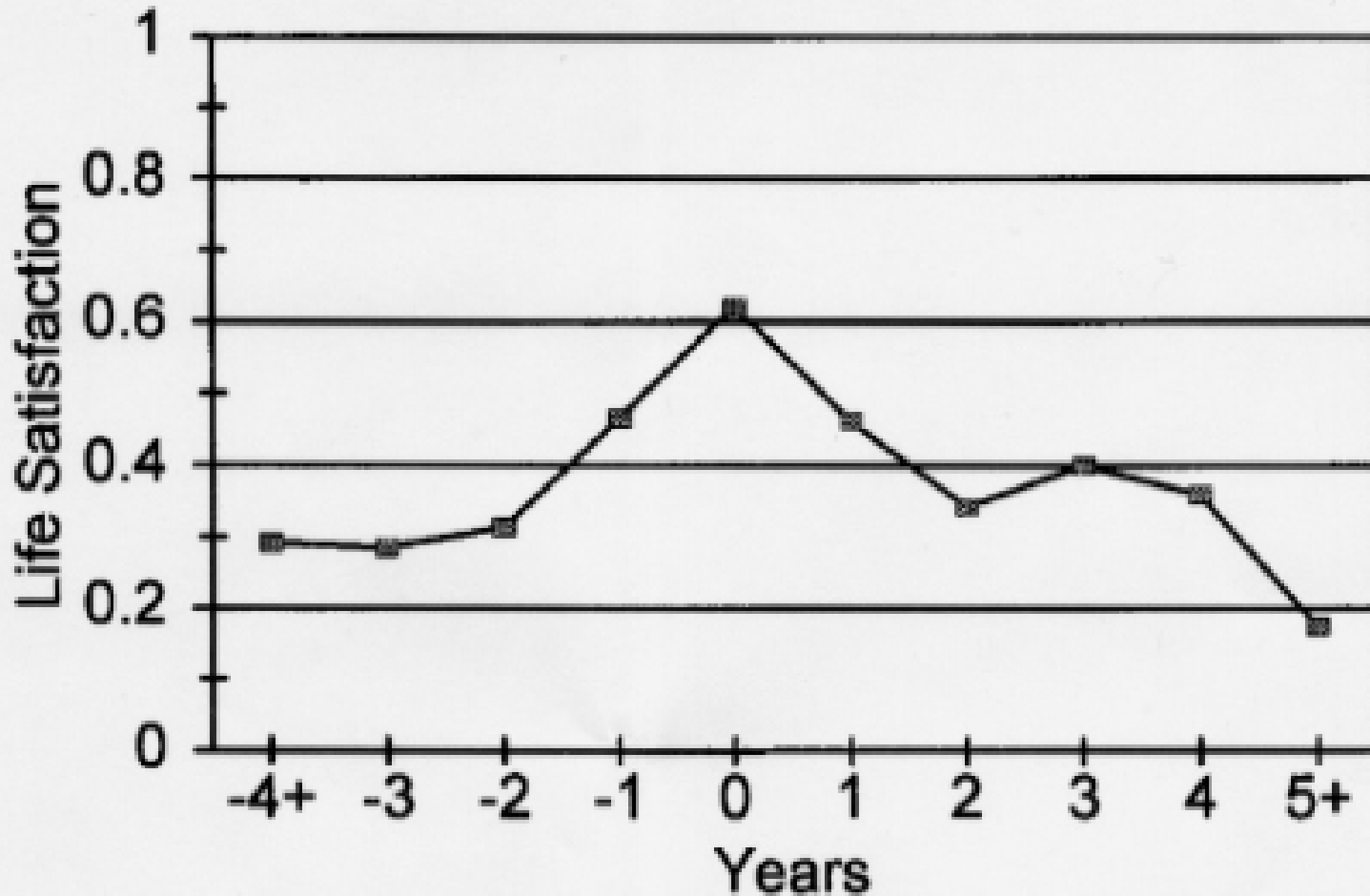


Despite a 250% increase in average real income in China from 1994 to 2005, there is no increase in reported life satisfaction

Problem: Things Don't Last Forever

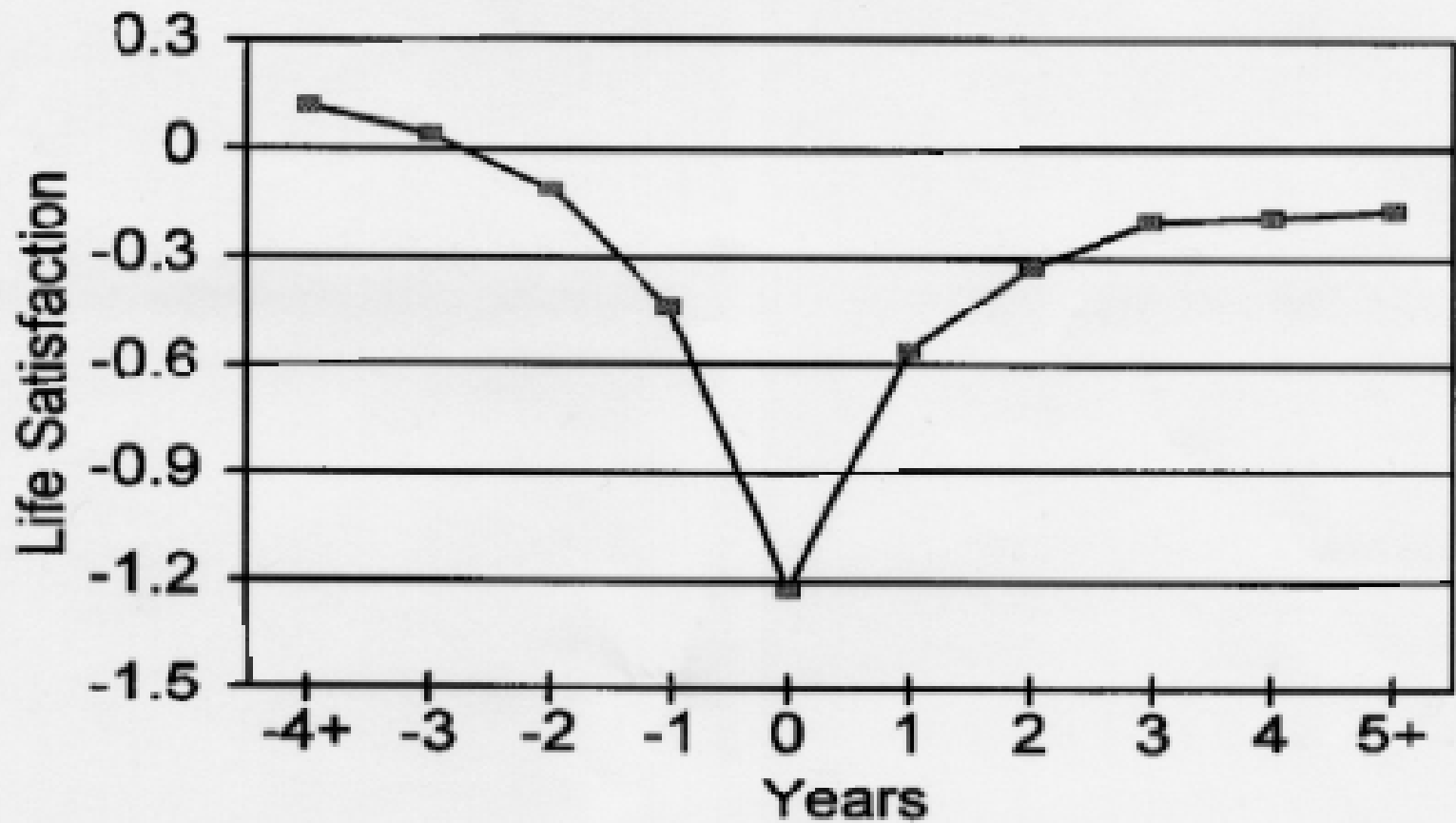


Marriage



From Clark, Diener and McCulloch (2001) based on 14 waves of the German Socio-Economic Panel Study (N~26,000)

Widowhood



What is Adaptation?

The hedonic response to a stable feature of life diminishes over time

Standard version

- **changes have their largest effect near the time they occur, and**
- **the longer ago it happened, the less effect a change still has**

After changes become states, they lose impact over time

- **Becoming a paraplegic vs being a paraplegic**
- **Getting married vs being married**
- **Buying a new car vs owning it**



Do People Believe They Will Adapt?

General finding: people *underpredict* their own speed and degree of adaptation (both negative and positive)

- Loewenstein & Frederick, 1997 (various, including income)
- Gilbert et al. 1998 (e.g., tenure)
- Schkade & Kahneman, 1998 (living in Cal.)
- Sieff, Dawes & Loewenstein, 1999 (reaction to HIV status)
- Wilson et al, 2000 (win or loss of team, or political candidate)



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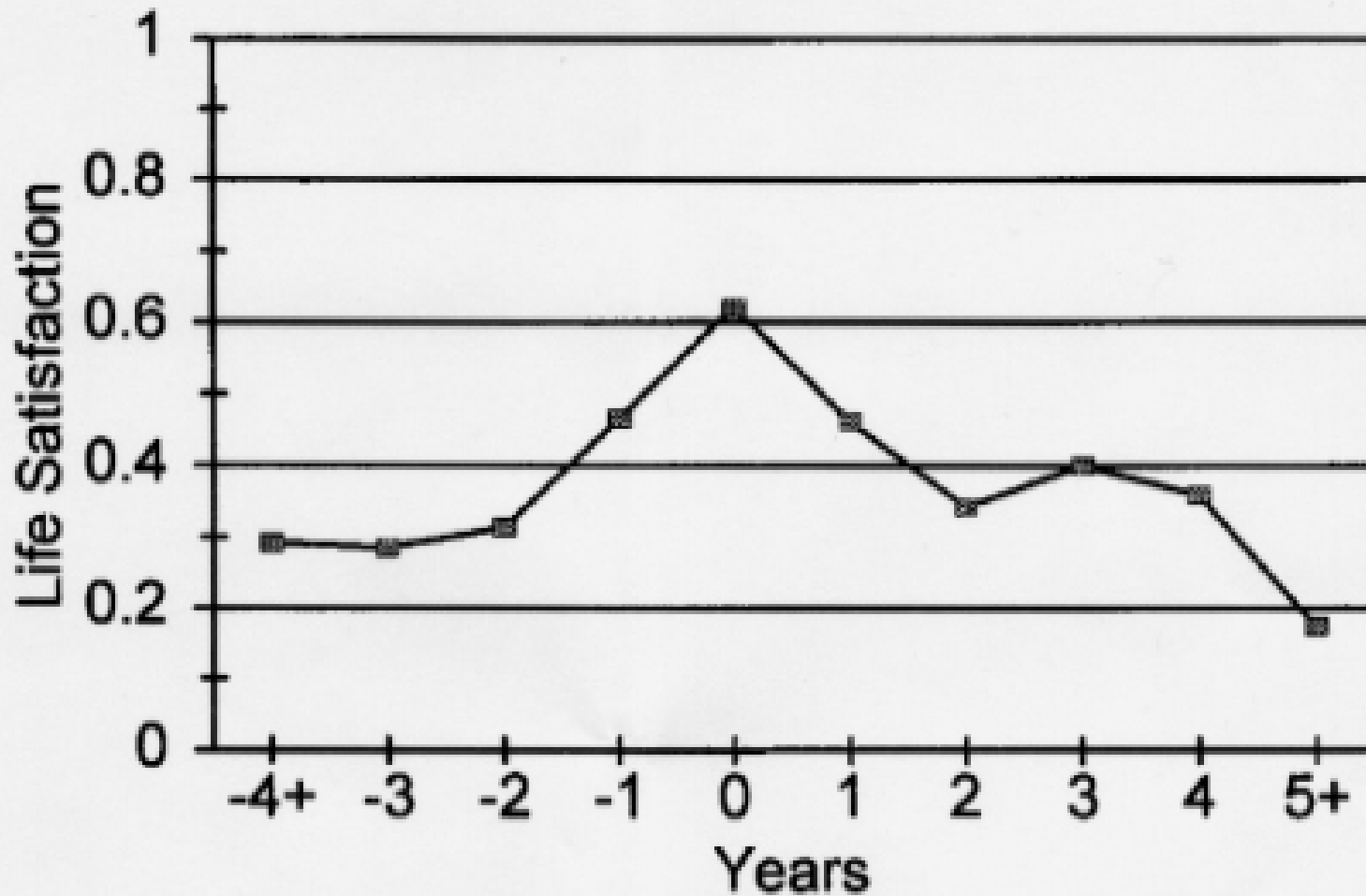


Examples of results using evaluated time use





Marriage



Benefits and Costs of Having a Mate



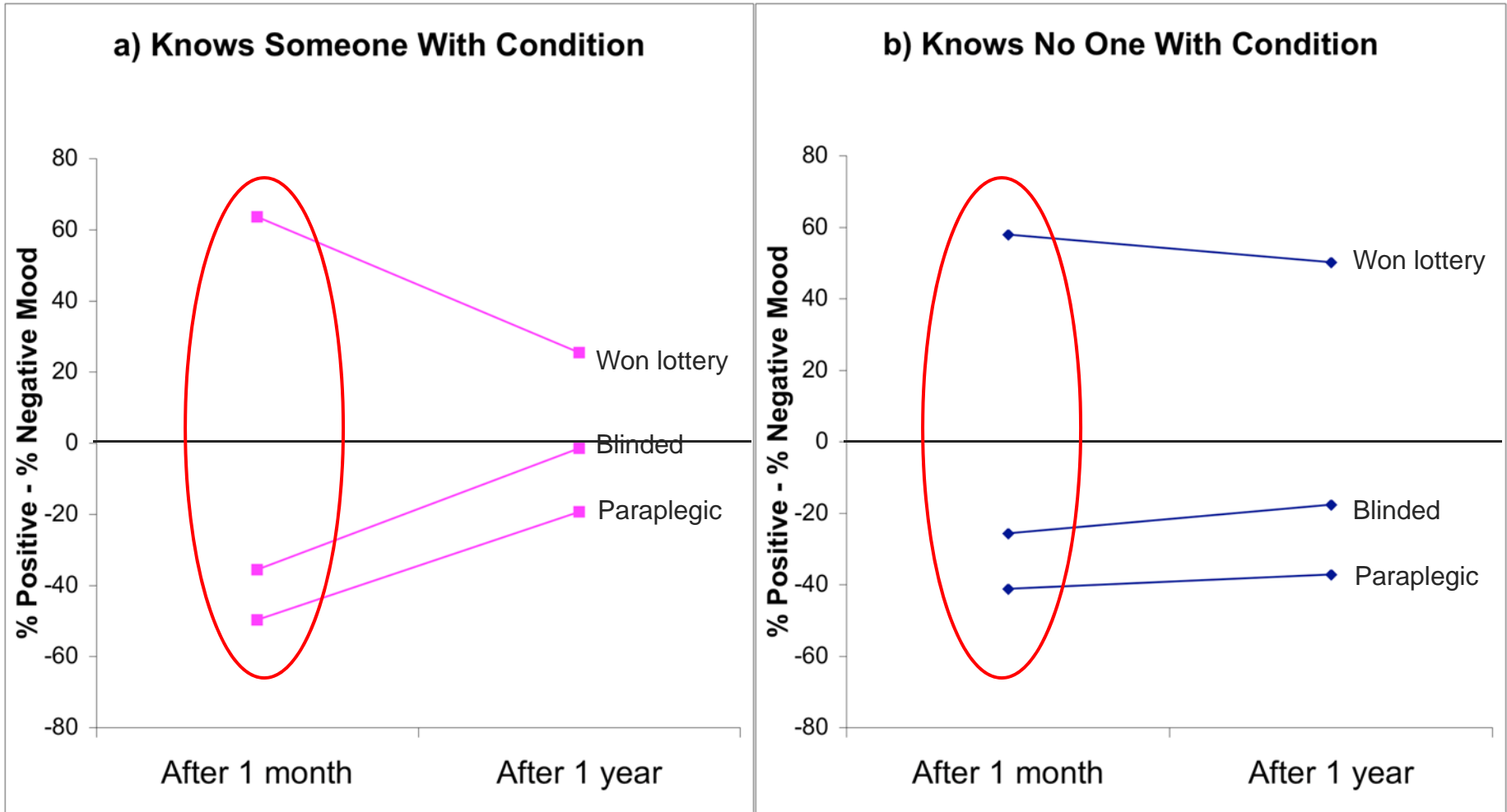
Does Experience Matter?

(Kahneman & Cohn, 1999; 2000)

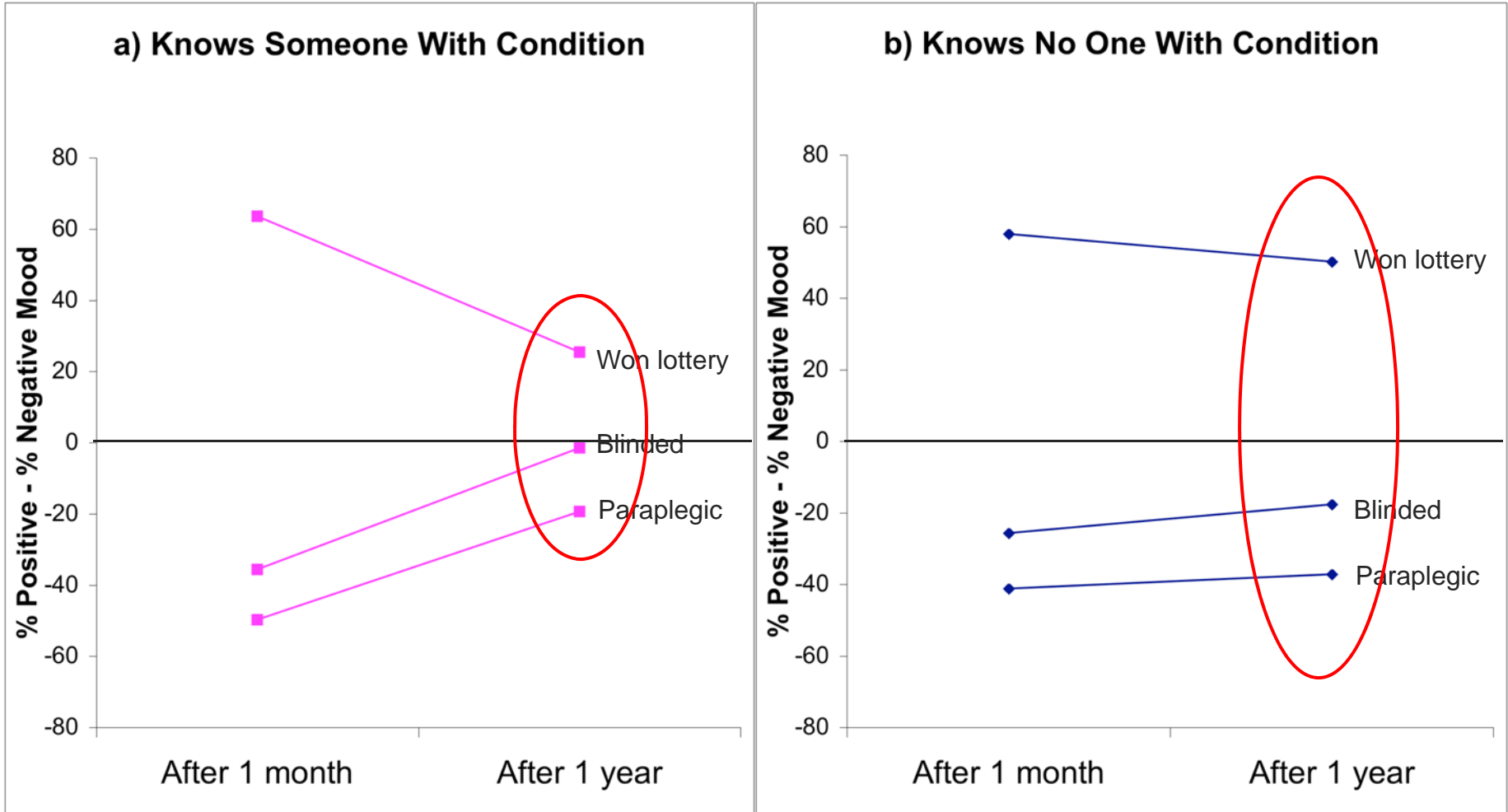
- A sample of 737 jury-eligible adults judged the mood of a person who had experienced a major life change
 - 1) becoming a paraplegic
 - 2) being blinded
 - 3) winning the lottery
- Evaluations either one month after or one year after the event
- Respondents were also asked whether they had ever known someone with this experience.



Same prediction after one month -- shared intuition about the initial impact of the change



But experienced people predict adaptation where inexperienced people don't



Why People Fail to Predict Adaptation

They use the emotion associated with “becoming X” as a proxy for the utility of “being X”

But experience with X does help



Some Health Care Applications

Most patients report a high quality of life

Brickman, Coates, and Janoff-Bulman (1978) Surprisingly small difference in self-reported happiness (on 5 point scale) between paraplegics and matched controls

Wortman and Silver (1987): *quadriplegics* reported no greater frequency of negative affect than control respondents!

Tyc (1992): “no difference in quality of life or psychiatric symptomatology” in young patients who had lost limbs to cancer compared with those who had not.



Non-patients don't expect patients to be as happy as they report being

Discrepancy between patients' evaluations of their own quality of life and non-patients' evaluations of what their quality of life would be if they had the same health conditions

Chronic dialysis (Sackett and Torrance, 1978)

- **Nonpatient predictions** .39
- **Patient reports** .56

Colostomies

- **Nonpatient predictions** .80
- **Patient reports** .92



Caregiver vs patient perspective

Slevin et al., 1990: % who say they'd accept a grueling course of chemotherapy for 3 extra months of life

radiotherapists	0%
oncologists	6%
healthy persons	10%
current cancer patients	42%

whose values should we use?



Within-subject study of kidney transplant and dialysis (Ubel et al)

(n=127 dialysis patients who ultimately received transplants; all numbers on 0-100 quality of life scale)

<u>Pre-transplant</u>			<u>One Year Post-Transplant</u>	
<i>Experienced</i> well-being	64.2	→	76.8	<i>Experienced</i> well-being
<i>Remembered pre-transplant</i> well-being	47.3	→	91.2	<i>Predicted</i> post-transplant well-being

Actual improvement 12.6

Predicted improvement 27.0

Remembered improvement 29.5



Overestimation before and after



Those not transplanted also over-predicted their own misery

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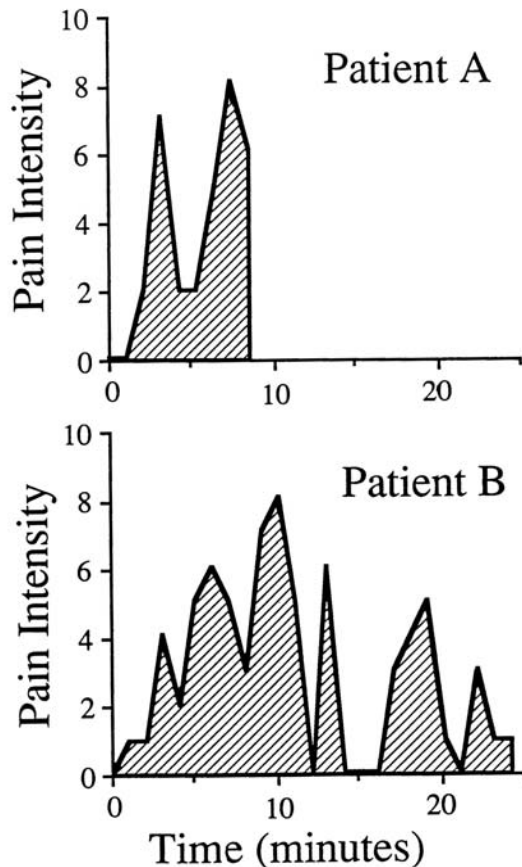
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The experienced utility of an episode

Patients undergoing colonoscopy reported their pain every 60 sec.



“How much did these patients suffer?”

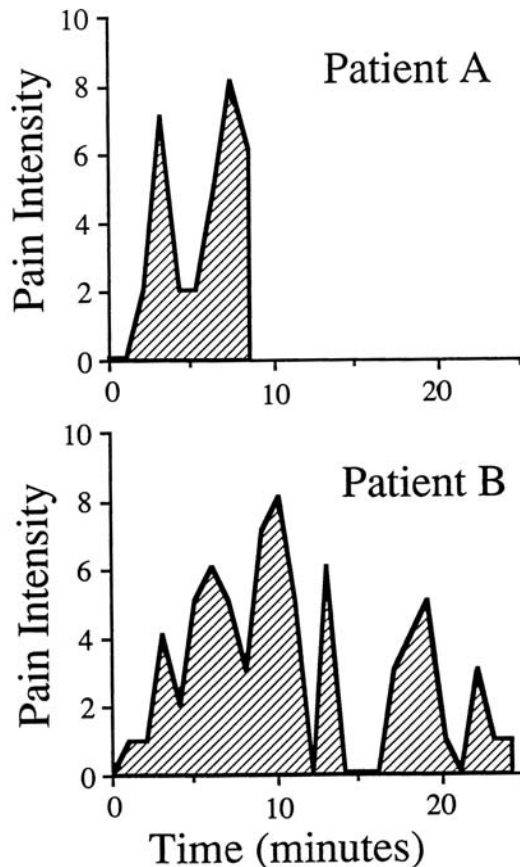
The question is asked from the perspective of an objective observer

It requires the evaluation of a temporal profile of moment utility

Observers agree that B suffered more

The remembered utility of an episode

Patients undergoing colonoscopy reported their pain every 60 sec.



“How much did these patients think they suffered?”

The question is asked from the subject's retrospective perspective

Rules of remembered utility

Correlations with Retrospective Ratings of a Colonoscopy

Peak and End only .67

Duration of procedure .03

“Peak-End Rule”

- The episode is evaluated as a composite moment, which gives much weight to Peak pain and to pain at the End

“Duration-neglect”



Summary

- The same thing looks and feels different Before, During and After.
- The same thing looks and feels different to those who do and don't have the condition or experience.
- Many things do matter in the short run, but eventually adaptation robs them of their influence.
- Different perspectives for different applications
- Anything you want to say Adam Smith already said 200 years ago

