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## **1 Introduction**

The idea, that happiness could be relative is very old and was already part of the works of some ancient greek philosophers, such as Protagoras (Schönpflug, 2000, p. 59). Even today, this belief is quite commonly held by many people. Despite the obvious importance of this claim for philosophy and society, there were no empirical studies on this subject until the 20. century. In 1978, Brickman, Coates & Janoff-Bulmann did a groundbreaking study to test the assumption, that perceived subjective happiness is quite independent of objective conditions.

In order to test this hypothesis, they compared the happiness of two groups: Lottery winners and victims of a crippling accident. They predicted, that the degree of experienced happiness in this groups is not so different as one might expect under this circumstances.

## **2 Theoretical framework**

The authors propose, that the adaptation level theory by Harry Helson applies not only for psychophysiological judgements, but also for judgements of experienced happiness.

The findings of Helson (1964) suggest, that the experience of present stimuli is relative to the mean intensity of stimuli, that were experienced in the past (Schönpflug, 1997, p. 116).

In the studies, that were carried out by Helson, subjects had to judge the experienced weight of stimuli objects. If the subjects were experienced heavy weights in the past, they considered the the new stimuli als rather light, if they experieced light ones in the past, they considered them as rather heavy. Helson assumed, that the experience of stimuli forms a subjective adaptation level which depends on the average of the past stimuli. All future stimuli are experienced relative to this subjective frame of reference: The adaptation level. As this new events also become integrated in the adaptation level, they shift this level upwards or downwards.

In order to study happiness issues, Brickman, Coates & Janoff-Bulmann derived two expectations from this theretical grounds:

There should be a

- **Contrast effect:** Events of everyday life are compared the extreme reference point in the past  
If one wins a million, this event is so positive, that all other positive events of everyday life lose some of their positive value for the subject: They don´t generate as much happiness, as before. That means, the positive effect of mundane events is lowered. This should happen in the short run.
- **Habituation effect:** Such a positive effect alters the adaptation level itself. This level is altered again, as all other events shift the adaptation level downwards (compared to the big positive event). This should happen in the long run.

### **3 Study 1**

The authors conducted short interviews with 3 groups of people: 22 Lottery winners, 18 paralyzed victims of severe accidents and a control group that consisted of 22 people.

Subjects should rate their happiness in the past, present and future and the happiness, that is generated by some mundane activities of everyday life on a 6 point-Scale (0-5).

The time between interview and critical event (lottery win or accident) was 1 month to 1 year.

The main results of this study were:

- Lottery winners rated the pleasure of mundane events of everyday life significantly lower than controls. This finding neatly fits with one of the predictions that the authors had.
- Accident victims reported a happier past, than controls did. This can be understood as kind of a „nostalgia effect“.
- Accident victims were not as unhappy, as expected. They reported lower general happiness, than lottery winners, but they reported happiness-levels that were quite well above the middle of the scale. This is remarkable, even if this data has not the quality of intervall-scales.

### **4 Study 2**

This study was made to root out several alternative explanations of this effects. As Study 1 was no experiment, there are always some alternative hypothesis, that can explain the gained data as well. One standard explanation in non-experimental designs is, that the compared groups were different from the very start, that means people that – regarding hapiness issues people who take part in lotteries are systematically different from people that don´t and that it is not important if they win or not. So – in Study 2 they compared lottery players with non lottery players and asked them about their happiness in everyday life contexts.

The result was, that this alternative explanation isn´t valid: Ticket buyers don´t differ significantly from non-buyers regarding happiness in everyday life.

Another alternative was, that it matters what the subjects think the study is about. In Study 1, the winners were told, that the study is about lottery winners, the other people were told, it is about happiness in everyday life. Maybe this difference is important.

In Study 2, they told some of the subjects, that the study is about lottery playing and some of the subjects, that it is about everyday life.

The results of this comparison indicate, that lottery players compare themselves to winners, if they think, that the study is about lottery playing: They rated the experienced past more unhappy and the expected future more happy, than subjects that thought the study is about everyday life or people, that don´t play lottery at all.

No other significant differences were found and there were also no significant interaction effects between buyers and non-buyers and lottery story and everyday-life story.

That means, that these findings can't alter the interpretations of the results of study 1. The ratings of mundane pleasures were not affected by the intervening variables that were checked in Study 2.

### **5 Conclusions by Brickman, Coates & Janoff-Bulmann**

- Lottery winners generate less pleasure by ordinary events of everyday life than controls. This effect can be explained by adaptation level theory and leads to the surprising fact, that they are not generally happier than people who didn't win in the lottery.
- The accident victims also showed the expected contrast effect, but they contrasted the present events with events in the past. This can be called a „nostalgia effect“ which is expected to wear off, as time goes by.
- The overall positive or negative effect of a single positive or negative event should not be overestimated: Most likely there are contrast effects, that compensate some of the effect and habituation effects, that limit the duration of a feeling generated by an event.

### **6 Critical remarks and discussion**

Methodological concerns:

- I think, this topic is very important for individuals, as well as for society as a whole. So it is very pleasant to see, that there are some empirical approaches to solve this question. My problem is, that I'm not satisfied with this non-experimental way of doing this research. I admit, that it is not easy to think of a way, in which this study can be converted to a kind of experimental design, but I strongly suggest, that future research should be conducted in a more controlled manner.
- Studies like this should be done in a longitudinal design. With their hypothesis in mind, I can't understand why the authors did this study in a cross-section design. Obviously, the time which passed since the critical event is a key variable in this whole happiness and adaptation-issue and habituation. Unless there are some longitudinal studies, interpretation of results will be always very limited.
- Another problem one has with this non-experimental studies is, that drop-out rates are typically high. This is also the case with the conducted studies: Over 50% of all people that were invited to take part in the study didn't respond. This fact leaves room for all kinds of speculations that can't be refuted.

- Another methodological issue is, that the authors carried out quite a lot of t-tests. They didn't care about the inflation of the  $\alpha$ -error. Thus, the reported results could be just  $\alpha$ -errors – even if this is not very probable.
- If one forces people to rate something they can't really represent accurately in their mind, Norbert Schwarz (1999) showed, that all kinds of biases can occur. In 1978, nothing of this was known, so Brickman, Coates & Janoff-Bulmann couldn't take this into account. Nevertheless, I think, that the research done by Norbert Schwarz and the ZUMA-group directly applies such studies like those that were done by the authors.

#### Theoretical concerns:

- The basic assumption of Brickman, Coates & Janoff-Bulmann was, that the adaption level theory by Helson can be applied on happiness-issues. This basic assumption was taken for granted – they didn't consider the possibility, that maybe this assumption isn't valid. There is a great difference between psychophysiological research and this rather „soft“ happiness-research. There are other theoretical frameworks in the field, that can explain the observed data as well. This other theories are rather new and it is beyond the scope of this work to talk about them in detail, but they are there.
- Some findings in psychophysiology itself contradict the predictions by Brickman, Coates & Janoff-Bulmann. Victor Sarris showed, that extreme events aren't integrated in the adaptation level. (Schönpflug, 1997, p. 119). If one takes the psychophysiological evidence serious, extreme events like winning a lottery or being a victim of a crippling accident shouldn't shift the adaptation level at all.
- Is it really plausible, that one keeps a tally of experienced events throughout the life? As far as I know, there is no neuropsychological possibility to store and represent all this events. This implicates, that even if the adaptation level theory applies for happiness issues, one should expect, that events which happened a long time in the past are not integrated in the adaptation level.
- Maybe this entire effect can be explained by a change in the environment of the individuals, that are affected by such extreme circumstances. Maybe the people in the environment of the lottery winners suddenly became greedy and jealous and the lottery winners have to fear the loss of the money, so their everyday life isn't that positive at all. Maybe the people in the environment of the accident victims suddenly became very caring and supportive, so that this eases the negative effects of the accident in some way.

- If the lottery winners don't know what to do with all the money and change their life in response to the „big win“, they might experience all kinds of stress, which might reduce the experienced pleasure.
- Maybe the observed effects haven't do anything with habituation, but a change in goals. If one has to work hard for his money, he has the goal to earn this money. This might not be easy, but it is a solvable problem. If one has all the money, he ever wanted he has the problem of setting new goals. Most of this new goals aren't really solvable: Everyone has to die, everybody gets older and the sense of life isn't figured out that easy. Maybe this problems were hidden by more proximal goals all the time, but as the lottery winners get all this money, they are struck by this unsolvable matters and don't know what to do. The accident victims on the other hand might be relieved, because they are relieved from the obligation to take part in the „rat race“ to gain better jobs and earn lots of money, etc. Everything that goes wrong can be attributed to their accident. No one will blame them for any failures any more. This could (in my opinion) boost their self-esteem and enjoyment of life – they are relieved of the responsibility to lead a succesful life. Aren't they?

## **7 References:**

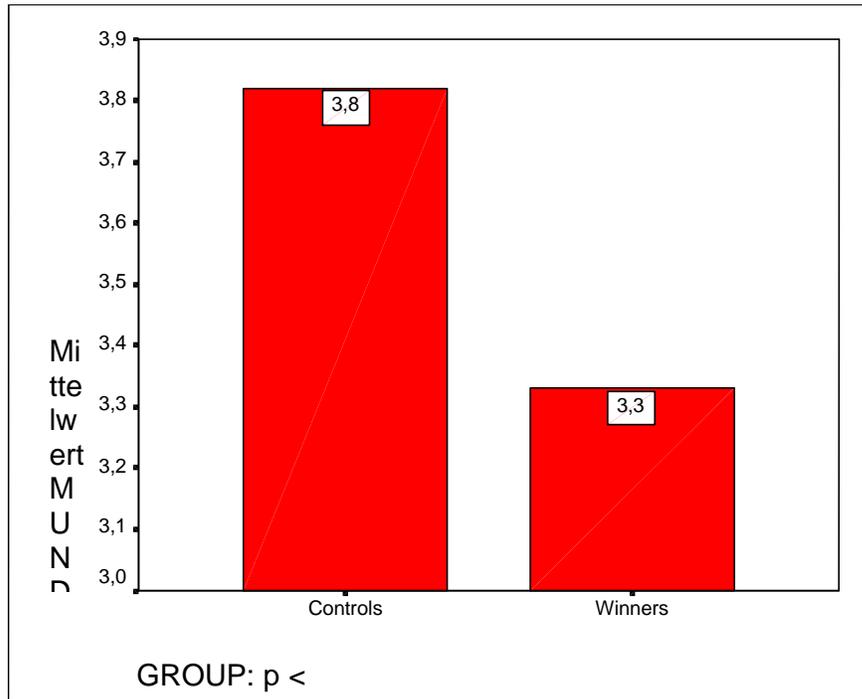
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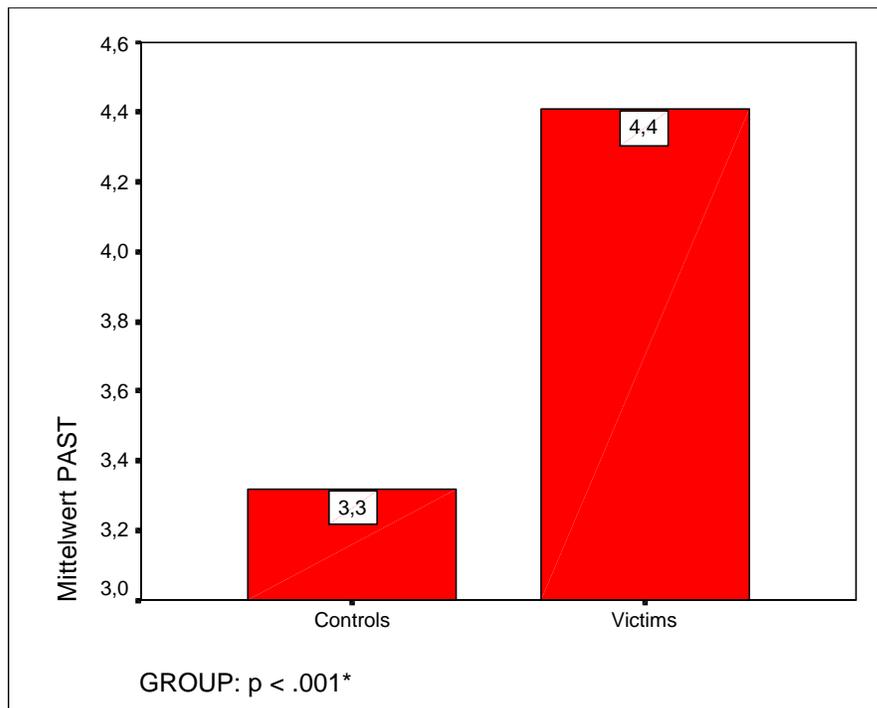
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## **8 Appendix: Charts of main results**



Significant difference between winners and controls regarding pleasure that is generated by activities of everyday life.



Significant difference between victims and controls regarding global happiness in the past.