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# A Template for Academic Presentations

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**Name of the Inviting Institution/Seminar Series**

March 24, 2019

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# Outline

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- 1 Introduction
  - 2 Study Design
  - 3 Results
  - 4 Discussion
  - 5 References
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# Introduction

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## Introduction 1: Choice of a Reasonable Aspect Ratio

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When preparing a presentation, we often do not know whether the native aspect ratio of the projector in the seminar room/lecture hall will be 4:3 or 16:9 (or 16:10).

In this case, it may be a good idea to choose an **intermediate aspect ratio**, see <https://github.com/josephwright/beamer/issues/497>. The idea behind this recommendation is that it minimizes the average loss of available space.

Hence, these templates include a presentation in the **14:9 aspect ratio** (see [https://en.wikipedia.org/wiki/14:9\\_aspect\\_ratio](https://en.wikipedia.org/wiki/14:9_aspect_ratio)): while it is imperfect for probably every projector that you will encounter, it is good on average for all of them.

(Please note that  $14:9 \doteq 1.556$ , which is pretty close to the “officially” recommended  $20:13 \doteq 1.5385$ .)

*Great Minds Discuss Ideas.  
Average Minds Discuss Events.  
Small Minds Discuss People.*

—<https://quoteinvestigator.com/2014/11/18/great-minds/>

### Background

- Temporal discounting is key concept in economics.
- Normative model: exponential discounting. However, observed decisions are hard to explain (e.g., Dohmen et al., 2012).
- One alternative: the “focusing model” by Köszegi and Szeidl (2013).

## Introduction 3

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### Research Question

- The composition of latex and of typical rubbers is given below.
- Is it true that trees are regularly tapped and the coagulated latex which exudes is collected and worked up into rubber?

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- The composition of latex and of typical rubbers is given below.
- Is it true that trees are regularly tapped and the coagulated latex which exudes is collected and worked up into rubber?

### Preview of the Results

- There is no feasible method at present known of preventing the inclusion of the resin of the latex with the rubber during coagulation.
- ⇒ Although the separation of the resin from the solid caoutchouc by means of solvents is possible, it is not practicable or profitable commercially.

## Introduction 4: Beamer block Environments

**Block title example: 0123456789 äöü ß ÄÖÜ officially finding flowers in fjords**

The block environment. The block environment. The block environment. The block environment. The block environment. Block title example: 0123456789 äöü ß ÄÖÜ officially finding flowers in fjords

### An Exemplary Example

I am the exampleblock environment. Use me for examples. I am really exemplary.

### Summary: Things to remember

The alertblock environment. Use this environment for really important stuff. The alertblock environment.



## Introduction 5: Beamer definition and theorem Environments

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**Definition (A Very, Very, Very, Very, Very, Very Long Name of a Concept that Spans Two Lines)**

The definition environment. Upright.

**Theorem (Theorem's Name)**

*The theorem environment. Italic.*

**Lemma (Lemma's Name)**

*The lemma environment. Italic.*

**Corollary (Corollary's Name)**

*The corollary environment. Italic.*

**Proof of Theorem's Name**

The proof environment. Upright.



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## **Study Design**

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## Study Design 1: Design of the Study

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- The latex of the best rubber plants furnishes from 20% to 50% of rubber.
- As the removal of the impurities of the latex is one of the essential points to be aimed at, it was thought that the use of a centrifugal machine to separate the caoutchouc as a cream from the watery part of the latex would prove to be a satisfactory process.

## Study Design 2: Design of the Study

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The watery portion of the latex soaks into the trunk, and the soft spongy rubber which remains is kneaded and pressed into lumps or balls:

**BAL<sub>1:1</sub><sup>I</sup>, BAL<sub>1:1</sub><sup>II</sup>:** Each payment transferred on single day.

**UNBAL<sub>1:n</sub><sup>I</sup>:** Earlier payoff concentrated, while later payoff dispersed over  $n = 2, 4$ , or 8 dates.

**UNBAL<sub>n:1</sub><sup>II</sup>:** Earlier payoff dispersed over  $n = 2, 4$ , or 8 dates, while later payoff concentrated.

## Study Design 3: Control Experiment

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- Control for alternative explanations.
- Many of the example sentences were taken from <http://sentence.yourdictionary.com/latex>.

## Study Design 4: An Example enumerate List

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1. First item in a list
  - a. First item in a list
    - i. First item in a list
    - ii. Second item in a list
    - iii. Third item in a list
    - iv. Fourth item in a list
  - b. Second item in a list
  - c. Third item in a list
  - d. Fourth item in a list
2. Second item in a list
3. Third item in a list
4. Fourth item in a list

## Study Design 5: An Example `itemize` List

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- First item in a list
  - First item in a list
    - ▶ First item in a list
    - ▶ Second item in a list
    - ▶ Third item in a list
    - ▶ Fourth item in a list
  - Second item in a list
  - Third item in a list
  - Fourth item in a list
- Second item in a list
- Third item in a list
- Fourth item in a list

## Study Design 6: Some Example Text

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### Let's include some Greek letters: $\alpha$ , $\beta$

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place.  $\sin^2(\alpha) + \cos^2(\beta) = 1$ . If you read this text, you will get no information  $E = mc^2$ . Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look.  $\sqrt[n]{a} \cdot \sqrt[n]{b} = \sqrt[n]{ab}$ . This text should contain all letters of the alphabet and it should be written in of the original language.  $\frac{\sqrt[n]{a}}{\sqrt[n]{b}} = \sqrt[n]{\frac{a}{b}}$ . There is no need for special content, but the length of words should match the language.

$$a\sqrt[n]{b} = \sqrt[n]{a^n b}.$$



## Study Design 7: Some Example Formulas

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Let's include some additional Greek letters:  $\gamma$ ,  $\phi$

$$p(R, \phi) \sim \int_{-\infty}^{\infty} \frac{\tilde{W}_n(\gamma) \exp \left[ iR/a \left( \sqrt{k^2 a^2 - \gamma^2} \cos \phi \right) \right]}{(k^2 a^2 - \gamma^2)^{3/4} H_n^{(1)} \left( \sqrt{k^2 a^2 - \gamma^2} \right)} d\gamma$$

Let's also include some upright Latin letters: **d**, **e**

$$\int_a^b f(x) dx = F(b) - F(a)$$

## Study Design 8: Additional Example Formulas (with upright $\pi$ )

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Only variables are set in italics according to ISO style—hence, we use upright “d,” “e,” and “ $\pi$ ” (`\mathup{d}`, `\mathup{e}`, and `\mathup{\pi}`}, respectively).

### Theorem (Simplest form of the *Central Limit Theorem*)

Let  $X_1, X_2, \dots$  be a sequence of i.i.d. random variables with mean 0 and variance 1 on a probability space  $(\Omega, \mathcal{F}, \mathbb{P})$ . Then

$$\mathbb{P}\left(\frac{X_1 + \dots + X_n}{\sqrt{n}} \leq y\right) \rightarrow \mathfrak{N}(y) := \int_{-\infty}^y \frac{e^{-v^2/2}}{\sqrt{2\pi}} dv \quad \text{as } n \rightarrow \infty,$$

or, equivalently, letting  $S_n := \sum_1^n X_k$ ,

$$\mathbb{E}f\left(S_n/\sqrt{n}\right) \rightarrow \int_{-\infty}^{\infty} f(v) \frac{e^{-v^2/2}}{\sqrt{2\pi}} dv \quad \text{as } n \rightarrow \infty, \text{ for every } f \in \mathcal{BC}(\mathbb{R}).$$

## Study Design 9: An `siunitx` Example Table

**Table.** Overview of the choice lists presented to subjects (adapted from Gerhardt, Schildberg Hörisch, and Willrodt, 2017).

	Alternative A				Alternative B			
	$c_{A,1}$	$p_{A,1}$	$c_{A,2}$	$p_{A,2}$	$c_{B,1}$	$p_{B,1}$	$c_{B,2}$	$p_{B,2}$
<i>Choice List I: risky/risky (<math>x = €22.00</math>, <math>r = €7.50</math>, <math>k = €11.50</math>; 25 rows)</i>								
Top row	€ 3.00	50%	€22.00	50%	€ 3.00	50%	€ 7.00	50%
Center row	€ 3.00	50%	€22.00	50%	€ 9.00	50%	€13.00	50%
Row with $m = 0$	€ 3.00	50%	€22.00	50%	€10.50	50%	€14.50	50%
Bottom row	€ 3.00	50%	€22.00	50%	€15.00	50%	€19.00	50%
<i>Choice List II: safe/risky (<math>x = €16.00</math>, <math>r = €5.00</math>, <math>k = €5.00</math>; 19 rows)</i>								
Top row	€11.00	100%			€11.00	50%	€21.00	50%
Center row	€11.00	100%			€ 6.50	50%	€16.50	50%
Row with $m = 0$	€11.00	100%			€ 6.00	50%	€16.00	50%
Bottom row	€11.00	100%			€ 2.00	50%	€12.00	50%
<i>Choice List III: "long shot" (<math>x = €14.00</math>, <math>r = -€36.00</math>, <math>k = €7.00</math>; 21 rows)</i>								
Top row	€ 7.00	90%	€50.00	10%	€ 7.00	90%	€10.00	10%
Row with $m = 0$	€ 7.00	90%	€50.00	10%	€11.00	90%	€14.00	10%
Center row	€ 7.00	90%	€50.00	10%	€12.00	90%	€15.00	10%
Bottom row	€ 7.00	90%	€50.00	10%	€17.00	90%	€20.00	10%
<i>Choice List IV: delayed payoffs (<math>x = €18.00</math>, <math>r = €6.00</math>, <math>k = €8.50</math>, paid in one week; 20 rows)</i>								
Top row	€ 9.50	50%	€12.00	50%	€ 9.50	50%	€24.00	50%
Above-center row	€ 9.50	50%	€12.00	50%	€ 5.00	50%	€19.50	50%
Below-center row	€ 9.50	50%	€12.00	50%	€ 4.50	50%	€19.00	50%
Row with $m = 0$	€ 9.50	50%	€12.00	50%	€ 3.50	50%	€18.00	50%
Bottom row	€ 9.50	50%	€12.00	50%	€ 0.00	50%	€14.50	50%

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## Results

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## Results 1: Overview

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1. As a secondary function we may recognize the power of closing wounds, which results from the rapid coagulation of exuded latex in contact with the air:
  - a. In some cases (Allium, Convolvulaceae, etc.) rows of cells with latex-like contents occur.
  - b. However, the walls separating the individual cells do not break down.
2. The rows of cells from which the laticiferous vessels are formed can be distinguished (6.3 p.p. vs. 2.6 p.p.;  $p < 0.01$ ).

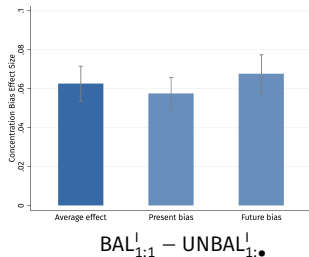
## Results 2: Our Main Results

The charts are taken from Dertwinkel-Kalt et al. (2017).

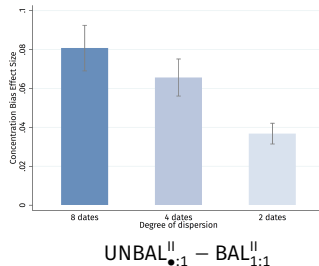
(A) Difference between treatment and control condition.

(B) Heterogeneity.

**A** Result 1



**B** Result 2

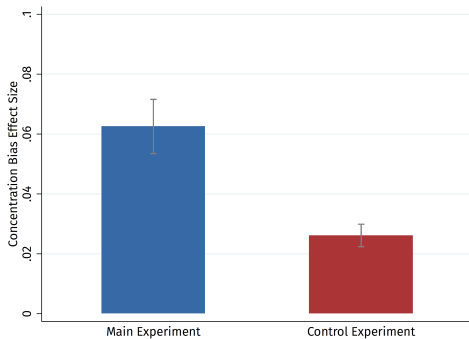


## Results 3: Main vs. Control Experiment

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Rule out some alternative explanations.

### Result 3



## Results 4: Another siunitx Example Table

**Table.** Example of a regression table (adapted from Gerhardt, Schildberg Hörisch, and Willrodt, 2017). Never forget to mention the dependent variable!

	(1)	(2)	(3)	(4)	(5)
Treatment	-0.390 (+0.352)	-0.228 (-0.205)	-0.729* [+0.377]	-0.449* [-0.245]	-0.453** {+0.204}
Female	0.948*** (0.354)	0.061 (0.233)	0.188 (0.372)	0.305 (0.226)	0.385* (0.222)
Female × Treatment	0.169 (0.514)	0.251 (0.325)	0.892* (0.533)	0.454 (0.341)	0.439 (0.307)
Final high school grade	-0.101 (0.198)	0.013 (0.144)	0.076 (0.224)	0.117 (0.146)	0.039 (0.133)
Trait self-control	-0.016 (0.016)	0.002 (0.010)	-0.016 (0.015)	-0.000 (0.010)	-0.007 (0.009)
Constant	2.357*** (0.239)	1.512*** (0.144)	-0.322 (0.265)	2.158*** (0.161)	1.437*** (0.152)
Observations	303	289	295	304	1191
R <sup>2</sup>	0.057	0.008	0.039	0.043	0.024
Treatment × (1 + Female)	-0.221	0.023	0.163	0.004	-0.014
$p_F[\text{Treatment} \times (1 + \text{Female}) = 0]$	0.327	0.008	0.192	0.000	0.003

Notes: Dependent variable:  $m_{...}$ . Robust standard errors (cluster-corrected for column 5) in parentheses. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ . Missing observations ( $N < 308$ ) due to exclusion of trials in which subjects behaved irrationally (i.e., chose a dominated option). The regressors Final high school grade and Trait self-control are mean-centered.



## Results 5: Yet Another siunitx Example Table

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**Table.** Figure grouping via siunitx in a table.

(1)	(2)	(3)
-0.100*	-0.10001*	-123456.444***
(2.871)	(2.87123)	[+50000.123]

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## Discussion

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## Discussion 1

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- The latex exhibits a neutral, acid, or alkaline reaction, depending on the plant from which it was obtained.
- The latex is therefore usually allowed to coagulate on the tree (Kőszegi and Szeidl, 2013).
  - ⇒ The latex, which is usually coagulated by standing or by heating, is obtained from incisions.
- See also Bordalo, Gennaioli, and Shleifer (2013).

## Discussion 2: Conclusion

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- When exposed to air, the latex gradually undergoes putrefactive changes accompanied by coagulation.
- The addition of a small quantity of ammonia or of formalin to some latices has the effect of preserving them.
- There is, however, reason to believe the following.
- The coagulation of latex into rubber is not mainly of this character.

## Discussion 3: An Automated Animation

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The automated transition to the next slide (= page in the PDF document) only works in full-screen mode.

- The feature is available in Adobe Acrobat and Acrobat Reader.
- Unfortunately, it is (currently, March 24, 2019) not available in macOS Preview, Skim, and SumatraPDF.



**Figure.** Step 1—Angle: 30.0°

## Discussion 3: An Automated Animation

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**Figure.** Step 2—Angle: 60.0°

## Discussion 3: An Automated Animation

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**Figure.** Step 3—Angle: 90.0°

## Discussion 3: An Automated Animation

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**Figure.** Step 4—Angle: 120.0°



## Discussion 3: An Automated Animation

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**Figure.** Step 5—Angle: 150.0°

## Discussion 3: An Automated Animation

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**Figure.** Step 6—Angle: 180.0°

## Discussion 3: An Automated Animation

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**Figure.** Step 7—Angle: 210.0°

## Discussion 3: An Automated Animation

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**Figure.** Step 8—Angle: 240.0°

## Discussion 3: An Automated Animation

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**Figure.** Step 9—Angle: 270.0°

## Discussion 3: An Automated Animation

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**Figure.** Step 10—Angle: 300.0°

## Discussion 3: An Automated Animation

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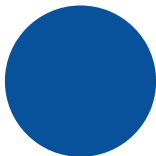
**Figure.** Step 11—Angle: 330.0°

## Discussion 3: An Automated Animation

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**Figure.** Step 12—Angle: 360.0°



## Discussion 4: Testing the allowframebreaks option

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Let's test automatic numbering with the allowframebreaks option.

On this slide, **no** number should be included in the frame title.

## Discussion 5: Testing the allowframebreaks option (1/3)

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Let's test automatic numbering with the allowframebreaks option.

On this slide, "(1/3)" should appear in the frame title.

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place.  $\sin^2(\alpha) + \cos^2(\beta) = 1$ . If you read this text, you will get no information  $E = mc^2$ . Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text *like this* gives you information about the selected font, how the letters are written and an impression of the look.  $\sqrt[n]{a} \cdot \sqrt[n]{b} = \sqrt[n]{ab}$ . This text should contain *all letters of the alphabet* and it should be written in of the original language.  $\frac{\sqrt[n]{a}}{\sqrt[n]{b}} = \sqrt[n]{\frac{a}{b}}$ . There is no need for special content, but the length of words should match the language.  $a\sqrt[n]{b} = \sqrt[n]{a^n b}$ .

## Discussion 6: Testing the `allowframebreaks` option (2/3)

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Hello, here is some text without a meaning.  $d\Omega = \sin \vartheta d\vartheta d\varphi$ . This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text *like this* gives you information about the selected font, how the letters are written and an impression of the look.  $\sin^2(\alpha) + \cos^2(\beta) = 1$ . This text should contain *all letters of the alphabet* and it should be written in of the original language  $E = mc^2$ . There is no need for special content, but the length of words should match the language.

$$\sqrt[n]{a} \cdot \sqrt[n]{b} = \sqrt[n]{ab}.$$

## Discussion 7: Testing the `allowframebreaks` option (3/3)

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Hello, here is some text without a meaning. This text should show what a printed text will look like at this place.  $\sin^2(\alpha) + \cos^2(\beta) = 1$ . If you read this text, you will get no information  $E = mc^2$ . Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text *like this* gives you information about the selected font, how the letters are written and an impression of the look.  $\sqrt[n]{a} \cdot \sqrt[n]{b} = \sqrt[n]{ab}$ . This text should contain *all letters of the alphabet* and it should be written in of the original language.  $\frac{\sqrt[n]{a}}{\sqrt[n]{b}} = \sqrt[n]{\frac{a}{b}}$ . There is no need for special content, but the length of words should match the language.  $a\sqrt[n]{b} = \sqrt[n]{a^n b}$ .

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## References

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## References

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## **Appendix**

### Backup Slides

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## Appendix: Modeling Concentration Bias

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Subjects consider a sequences of consequences  $\mathbf{c}$  from choice set  $\mathbf{C}$ .

- **Standard discounted utility:** Suppose that the instantaneous utility function  $u$  satisfies  $u' > 0$  and  $u'' \leq 0$ , and that earlier consequences are preferred over later consequences of the same magnitude, i.e.,  $D(t) \leq 1$ :

$$U(\mathbf{c}) := \sum_{t=1}^T D(t) u(c_t), \quad \text{where, e.g.,} \quad D(t) = \delta^t \text{ or } D(t) = \frac{1}{1+kt}.$$

- **Focusing model (Kőszegi and Szeidl, 2013):**

$$\tilde{U}(\mathbf{c}, \mathbf{C}) := \sum_{t=1}^T g_t D(t) u(c_t), \quad \text{where}$$

$$g_t \equiv g[\max_{c' \in \mathbf{C}} u(c'_t) - \min_{c' \in \mathbf{C}} u(c'_t)]$$

- Weighting function  $g[\cdot]$  increases in difference of maximum and minimum possible utility at a point in time.
- Subjects overweight intertemporal consequences with a greater range.