



TANJA OSTERMANN

## Predecisional reevaluation of information: *Factors of influence*

### Abstract

Research has shown that the predecisional processing of information is biased in a systematic way (see Brownstein, 2003, for an overview). Simon, Snow, and Read (2004) found a coherence-driven reevaluation of information (called *coherence shifts*) which can be explained by parallel constraint satisfaction mechanisms of consistency maximizing (see also Glöckner & Betsch, 2008). Two studies were conducted to research the process of consistency maximizing. Using a Solomon four-group design it was shown that the reevaluation of information is due to the treatment (reflecting on a decision task), whereas pretesting has no influence (first experiment). Furthermore, evidence suggests that the strength of predecisional reevaluation depends on the number and distribution of cues (second experiment).

### ► Introduction

Simon et al. (2004) observed bidirectionality in reasoning; due to automatic processes of maximizing consistency the valuations of facts are changed to be coherent with the emerging decision (*coherence shifts*).

Glöckner, Betsch, and Schindler (under review) generalized the findings to decisions based on probabilistic inferences (*city size paradigm*): the subjective assessment of the predictive power of cues (*cue validity*) is changed during the process of decision making.

Glöckner and Betsch (2008) developed a parallel constraint satisfaction model which regards consistency maximizing processes as the core mechanism of decision making.

### ► Research Question

Which factors have an influence on the predecisional reevaluation of information?

### EXPERIMENT 1

Design: Solomon four-group design

	group 1	group 2	group 3	group 4
<b>Pretest:</b> Please estimate the validity of the following weather forecasts for predicting the weather in a holiday destination 7 days from now.	✓	✓	✗	✗
<b>Treatment:</b> Please reflect on the following question: In which holiday destination do you expect sunny weather?	✓	✗	✓	✗
<b>Posttest</b> (see Pretest)	✓	✓	✓	✓

### ► Results

2 (Treatment) x 2 (Pretest) ANOVA:

No evidence for an influence of pretesting

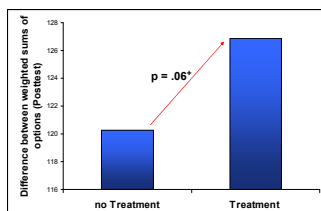
- main effect of Pretest:  $F(1, 195) = 0.88, ns$
- interaction Pretest x Treatment:  $F(1, 195) = 0.15, ns$

ANCOVA (with pretest scores as covariate):

Evidence for an influence of the treatment

The spreading apart of alternatives is greater if the treatment is given:

- main effect of Treatment:  $F(1, 94) = 3.68, p = .06, \eta^2 = .04$



### EXPERIMENT 2

Design:

2 Measurement of cue validities (Pre- and Posttest) x 2 Cue Pattern (1:1 vs. 1:3 vs. 3:3)

#### Pretest:

Please estimate the validity of the following weather forecasts for predicting the weather in a holiday destination 7 days from now.

#### Treatment:

Please reflect on the following question: In which holiday destination do you expect sunny weather?

1:1

	A	B
ZDF	☀	☁
Wetteronline	☁	☀

1:3

	A	B
Wetteronline	☀	☁
Sat.1	☁	☀
Bild	☀	☁
ZDF	☁	☀

3:3

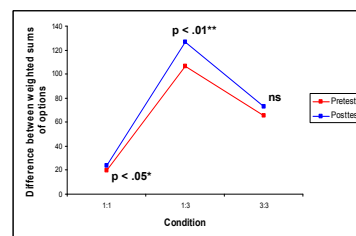
	A	B
Süddeutsche	☀	☁
ZDF	☁	☀
Bild	☀	☁
N24	☁	☀
Sat.1	☀	☁
Wetteronline	☁	☀

Posttest (see Pretest)

### ► Results

The strength of predecisional reevaluation depends on the distribution and the number of cues.

- significant interaction Measurement x Cue Pattern:  $F(2, 110) = 3.78, p < .05, \eta^2 = .06$



#### Distribution of cues:

The lesser the amount of elements which contradict the decision in relation to elements which support the decision, the higher the strength of predecisional reevaluation:

- the strongest reevaluation is found for cue pattern 1:3,  $t(38) = 3.63, p < .001$  (one-tailed),  $d = .58$

#### Number of cues:

With equal relation between supporting and contradicting elements predecisional reevaluation is stronger when the number of cues is high:

- the reevaluation for cue pattern 3:3 is significant,  $t(37) = 1.77, p < .05$  (one-tailed),  $d = .29$ , but not for cue pattern 1:1,  $t(36) = 1.68, ns$

### Conclusion and Future Directions

The predecisional reevaluation of information is due to the treatment (reflecting on a decision task), whereas pretesting has no significant influence.

The strength of reevaluation depends on the distribution and number of cues:

*The higher the conflict induced by the number and distribution of cues presented, the stronger the predecisional reevaluation.*

Future studies need to focus on further situational and personal factors which have an influence on the strength of predecisional reevaluation.